A.P.P.L.E. Co-op Presents:

The Better Late Than Never Log

PRODUCTS FOR YOUR PERSONAL COMPUTER

The first Mac upgrade that can improve your health

Seeing is believing. Now you can enjoy a full viewing screen on your Mac without having to take out a loan.

A.P.P.L.E. Co-op is proud to introduce these new products:

Macintosh Video Adapter

Convert your Mac, Mac Plus, or Mac SE to a real size screen or projection monitors. No soldering or holes to drill. Installs by popping open the Mac case* and simply plugging in the video module. This one module can be used to chain up to (6) monitors or 200 feet of video cable. Compatible with internal hard drives, memory boards, and co-processors. Because this unit is a snap in, it can be removed or transferred to another Mac without leaving installation scars. Requires a high scan rate, high resolution monitor, such as the one below to match the quality of the Macintosh.

Suggested Mfr list $129.00.
Your price $99.00 | Code HMPR04 | Ship $1.00

SE Video Adapter

Note: SE adapter is designed differently than for other Mac's. When ordering you must specify if you need SE type. If nothing is specified, you will receive the standard Mac Plus adaptor.

Suggested Mfr list $129.00.
Your price $99.00 | Code HMPR06 | Ship $1.00

Powerscreen 12" High Scan Monitor

Relieve eye strain and bring your Mac into the current standards. Adds 70% more viewing area. Platinum colored case is styled to match the new Mac+'s and SE's. Compatible with all software. Ideal for classroom instruction, User group demos, trade shows and for individuals that want to step up to a real size display.

Suggested Mfr list $349.00 **Your price $295.00 | Code HMPR12 | Ship $20.00**

Bundle Savings Package

Macintosh Plus Video Adapter & Powerscreen 12" Monitor
Suggested Mfr list $449.00.
Your Cost $340.00 | Code HMPR02 | Ship $21.00

Macintosh SE Video Adapter & Powerscreen 12" Monitor
Suggested Mfr list $449.00.
Your Cost $340.00 | Code HMPR08 | Ship $21.00

* Mac Tool Kit Price $6.95 |Code HMDVTR | Ship $1.00

Ordering information:
Call Today **A.P.P.L.E. Co-op**

1-800-426-3667
(U.S. OUTSIDE WA. STATE)

1-800-527-7562
(WASHINGTON STATE)

1-800-237-4644 (CANADA)

WATTS LINES ARE FOR ORDERS ONLY

FOR INFOMATION CALL
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A.P.P.L.E. Co-op
290 SW 43rd Street
Renton, WA 98056

MacUp™

The Intelligent Hard Drive Backup Utility

Hard Disk Drive Back-up with YOU in Control

MacUp™ is not just another back-up program. We all know the importance of backing up our hard disk drive, but the incompatibilities between different manufacturers equipment and their software is one of the major reasons MacUp was written. In addition to working with any HFS device, MacUp can back up your hard drive with its unique time and date feature. Now you can set your Mac on auto pilot and not have to play nursemaid to your tape back-up device. Most standard back-up programs run in two modes; back-up all, or back-up changes. With MacUp you set the boundries of what you need. If you want to back up only those files that start or end in a name or letter, you select it "how you want it". Most of us place files inside folders, MacUp allows you to display by filename (using visual branch method) what files are inside nested folders. And if you have a network system, MacUp supports networks. Now any Mac on the system can be used to back-up the host whenever you tell it to and it will do it all automatically! **All for a $19.95 program.**

Major features include:
•Special time delayed AUTO Back-up
•Full volume or incremental data back-up capabilities with source and destination volumes selected by the user
•Full user discretion on back-up session configuration where user may select and edit individual files/folders to be backed up and save selection criteria for future use
•Unique separate folder and file view windows that are configurable, cross scroll with each other and can be printed to show the entire directoryand hierarchical strucure of any volume
•Much, Much,More

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NOTE: A.P.P.L.E. Co-op software is not copy protected and is identified in this catalog by the title and name of the author in the description. Software supplied by *other* publishers may be copy protected.

Anthology Volumes™

Each disk contains all the programs found between the pages of *Call -A.P.P.L.E.* magazine for a six month period, unless otherwise indicated (see below). A great way to obtain terrific programs and utilities without the bother and worry of typing them in correctly. Consult the individual issues or Peeking Compendiums for program documentation as these disks are not stand-alones.

Volume Product Code™

$12.50 | Codes Below | Ship $.06

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VOL 16a	(Jul - Sep '86)	(SA16A)
VOL 16b	(Oct - Dec '86)	(SA16B)
PASCAL 81	(Jan - Dec '81)	(SPA1)

APPLEWORKS EXTENSIONS

AutoWorks™

from The Software Touch
Apple IIe, IIc (128K required)

$31.00 | Code S2SEAW | Ship $.63

AutoWorks is the AppleWorks enhancement program that adds to your AppleWorks the following features:

- Mail Merge — Use Mail Merge to print out form letters, print out reports or fill out forms from an AppleWorks database file. Form letters are automatically reformatted for each letter and since AutoWorks is built-in, you don't need to exit AppleWorks to do a mail merge.
- Macros — AutoWorks powerful macro capabilities allow you to enter hundreds of keystrokes into AppleWorks by pressing a single key. With macros, you can program AppleWorks to do anything you want it to do. You can even create your own AppleWorks commands.
- Disk Organizing — AutoWorks reads your ProDOS disk directories into an AppleWorks database file so you can quickly locate a specific file and determine what disk it is on, print out sorted reports of the contents of your disks, locate disks with room to store more files, find the most recently updated files, etc. If you own a hard disk, this feature is great for obtaining information for every file on the entire disk.
- Mouse Control — With AutoWorks you can usethe mouse to make menu selections, quickly scroll through documents, and to position the cursor to make updates to your documents.

Infomerge™

from Pinpoint Publishing
Apple IIc,IIe (128K required)

$43.95 | Code S2P5IM | Ship $1.00

Infomerge is a reporting enhancement program for the AppleWorks database. From it you have direct AppleWorks database manipulation without record limitations and clipboard print files to get in your way. Provides easy-to-use calculated fields. Automatically aligns the decimal points on your columnar printouts.

Key Player™

from Pinpoint Publishing
Apple IIc,IIe (128K required)

$27.95 | Code S2P5KP | Ship $1.00

Turn one keystroke into paragraphs of boiler plate text or complete AppleWorks solutions. Add new RAM-resident commands to AppleWorks like Save then Print or Delete Paragraph with Undo, new screen prompts or pop-up menus. Key Player remembers everything you type, recording macros directly to an AppleWorks file for quick review and easy editing.

Pinpoint 2.0™

from Pinpoint Publishing
Apple IIc,IIe (128K required)

$45.00 | Code S2P5P1 | Ship $1.88

Adds pop-up accessories for use in AppleWorks or stand alone. Includes Appointment Calendar, Telephone Dialer, Notepad, Typewriter, Envelope Addresser, Calculator, Communications, and Graphics. The latter lets you have up to 16 single or double HIRES graphics inside any AppleWorks document. With Pinpoint Toolkit, you can even create your own accessories!

Pinpoint Toolkit™

from Pinpoint Publishing
Apple IIc,IIe (128K required)

$29.95 | Code S2P5TK | Ship $1.00

Eight new desktop accessories including the tools you need to write accessories all your own. Customize your Pinpoint Desktop Accessories program with the Accessory Mover, format new disks or copy files with the pop-up ProDOS Filer and add things up with the Programmer's Calculator with tape. When you feel like writing desktop accessories or any new program for that matter, you'll find the memory window Video Resource Editor and the Resource Converter invaluable power tools. It also includes source code and software examples for the telephone dialer, print screen utility, and an enhanced calendar printing utility.

Plus-Works2™

by Norwich Data Services
Apple II+,IIe, Franklin

$39.00 | Code SPLUSW | Ship $.75

Even those of us who are still reluctant to give up the friendship of our trusty II+'s can enjoy the power of AppleWorks!

Plus-Works2 is a "patch" program, which modifies the AppleWorks™ Startup disk and allows "the rest of us" to enjoy AppleWorks on our Apple II+'s, and Apple II look alikes! PlusWorks2 recognizes the A.P.P.L.E. Big Board and most peripheral slot ram cards using 100% of memory. The AppleWorks Desktop can be expanded up to *one mega-byte* depending on the size of the ram board. With this extra memory, you can open multiple documents at the same time, work on monster spreadsheets, and big databases. With boards of 256K and larger, the AppleWorks program can reside entirely in memory! This greatly speeds up moving from function to function in AppleWorks.

Features include:

- Easy to use one-time patch program modifies the AppleWorks Startup program.
- All Open-Apple commands handled on the II+ keyboard!
- Desktop space of up to 1 megabyte.
- Supports VIDEX compatible 80-column displays with inverse capability, also Smart term 2, Wizard 80, and Vision 80.
- Database capacity expanded to 4200 records.
- Recognizes Big Board and other II compatible memory boards on Franklins.
- Recognizes 64K of PCPI Starcard, ALS enhanced CP/M boards, Franklin 64K CP/M boards.

ReportWorks™

from Megahaus
Apple IIe, IIc
$89.00 | Code S2MDRW | Ship $.69

AppleWorks is great but let's face it, it has its weaknesses and one of these weaknesses is the report generation capabilities of the database ReportWorks comes to the rescue in grand style. It is a powerful report generator that allows you to create just about any type of report you could dream of using not just one file, but multiple AppleWorks files, both database and spreadsheet! With ReportWorks, you can fill out any form, including invoices and purchase orders, calculate and print estimates and proposals and much, much more. In effect, ReportWorks gives AppleWorks relational capabilities. Pull information from a database file, combine it with information from another database file and combine all of that with more information from a spreadsheet file.

- Looks and feels like AppleWorks.
- Flexible and easy to use.
- Built-in mathematical functions.
- Calculates tax.
- Allows for title and summary pages.
- Adds relational database capabilities to AppleWorks.

Spelling Checker™

from Pinpoint Publishing
Apple IIc,IIe (128K required)
$35.00 | Code S2P5SP | Ship $1.00

Check the spelling of your documents without leaving AppleWorks. Check a word or paragraph at a time, or the entire document when you're done. Has a 61,000 word dictionary and huge capacity for your personal dictionary.

Super MacroWorks™

from Beagle Brothers
Apple IIe, IIc, IIGS
$29.95 | Code S2B1SM | Ship $1.31

Streamline AppleWorks with your on macro commands. Just boot AppleWorks as always to gain the additional power of over 4000 keystrokes — worth of custom macros.

New features include:

- Auto Startup — Runs AppleWorks and loads any file automatically.
- Pathname Menus — Select new directories from menus instead of by typing pathnames.
- Auto time/date — One keystroke prints current time and date.
- Character macros — Convert from upper to lower case and back.

DATABASES

APMail.Pro™

by Ken Kashmarek, adapted from a program by D.D.Redhed and F.W.Merchant
Apple II+,IIe,IIc
$18.95 | Code SAPMPR | Ship $.19

APMail.Pro is a database program specifically designed to maintain mailing lists and print mailing labels. Sorting and other speed-critical functions are in fast machine language. The balance is in Applesoft for user modifiability. Utilities are included for converting earlier versions of APMail A familiarity with ProDOS pathnames and simple file commands is required for use of this program.

Call-A.P.P.L.E. FASTFIND

by Jim Hammond
Apple II+,IIe,IIc,III
$15.00 | Code SFAST | Ship $.50

When you need the answer now, don't waste valuable time rummaging through stacks of books or magazines looking for the one bit of information that will pull it all together. "I know I've seen it somewhere but I just can't remember where or when!" Sound familiar?

Put the answers at your finger tips with *Call-A.P.P.L.E. FASTFIND*. This package includes four diskette sides packed with program and information. The complete database contains summaries of all *Call-A.P.P.L.E.* magazine articles, letters to the editor, The Apple Doctor and more, printed from 1978 through 1984. The Peeking At *Call-A.P.P.L.E* series is also indexed. Search for subject, title or author name. This version has both Hard Disk capabilities and speed enhancements for operating with floppy disk. Features include:

- Single or multiple search keys.
- Search supports wildcards and logical operators

- References "fixes" to program listings published in later issues. No more wondering why the program won't work.
- Print hardcopy reports of your searches.
- Easily add or change entries with your word processor.
- Search multiple disks with one keystroke.

FASTFIND — 1985 Index

With: All About Applesoft Index

$10.00 | Code SFAST2 | Ship $.50
This disk contains the *Call-A.P.P.L.E.* FastFind index for 1985. Also includes the Author and Title index for the magazine from 1978 to 1984. As a special bonus, a summary of articles in "All About Applesoft," the classic advanced guide to Applesoft BASIC has been added.

FASTFIND — 1986 Index

$10.00 | Code SFAST3 | Ship $.50

This disk contains the same quality summaries of the pages of *Call-A.P.P.L.E* we have come to expect from Jim Hammond. We think you'll agree that it 'll pay for itself in its first use.

Profiler 3.0™

from Pinpoint Publishing
Apple IIc,IIe (128K required)

$49.95 | Code S2P5P3 | Ship $1.00

Mouse-driven database manager and flexible report writer handles up to 65,000 records using a tree-structured indexing method. Each record can contain up to 250 fields, including free text comment fields. May be used without a mouse.

Please call for availability.

Profiler 2.2™

from Pinpoint Publishing
Apple IIc,IIe (128K required)

$40.00 | Code S2P5P2 | Ship $1.00
Similar to version 3.0 but no mouse support or tree-structured indexing.

Volksfiler™

by Glen Hausler
Apple II+,IIe,IIc

$12.50 | Code SVOLKS | Ship $.13

Volksfiler is a freeform electronic card file program where each "card" is represented by your Apple screen. You may enter information wherever you want it on the screen. When you recall the information later, it will appear exactly as you entered it. Information can be sent to your printer if you choose. The first word on each screen is used as a sort key. The fast search command automatically scans the entire contents of every screen for the word you want. Automatic data compression assures efficient use of disk storage. Volksfiler is easily mastered and is best suited for informal "index-card" type applications and other jobs where a conventional database structure would be too restrictive.

DIAGNOSTICS

AP Test™

by Mike Butler
Apple II+,IIe (Not Enhanced), IIc

$12.95 | Code SAPT | Ship $.13

Low-cost diagnostics program designed to thoroughly test your Apple. ApTest features tests of both RAM & ROM memory, modem, keyboard, disk drive speed, drive head alignment, drive controller card and the game I/O. Will test Apple II, II+, IIe and IIc.

EDUCATION

The Schoolhouse Grader™

by Jim Campbell
Apple II+,IIe,II

$4.95 | Code SGRADE | Ship $.13

This easy to use program should be of great value to teachers who wish to try using a computer for record keeping. Program modules included are:

- New Term/ All New Roster.
- New Grade Period/ Same Roster.
- Add/Change/Delete Roster.
- Print Roster.
- Enter Scores For Entire Class.
- Enter/Examine Individual scores.
- Examine Missing Assignments.
- Frequency Distribution Table.
- Standard Deviation.
- Class Mean.
- Minimum/Maximum Student Scores.

Requires any Apple with 48K and one disk drive. A second drive and a printer are recommended.

ENTERTAINMENT/ GRAPHICS

Also see the special Electronic Arts Section.

Classic Game Set™

from Synergistic Software
Apple II, II+, IIe, IIc

$14.95 | Code SAGS | Ship $1.00

Consists of:

1. Campaign Trilogy
2. Apventure to Atlantis
3. Odyssey: The Compleat Adventure

Campaign Trilogy™

Dungeon Campaign: Explore complex maze-like dungeons in search of gold, jewels, and artifacts.

Wilderness Campaign: A Hi-Res crusade, you equip an army and challenge the evil necromancer.

Sorcerer's Challenge: A two player competition between two powerful magicians. Paddles.

Apventure to Atlantis™

The first of the new *action adventure games*, an excellent combination of true role playing, animated movement, strategy and arcade-like combat, and challenging adventure puzzles to solve. These interlocking programs have colorful animated graphics, extensive sound effects, informative text, detailed maps, and endless variety. Text and still picture adventures do not compare with the action and realism involved in this, Robert Clardy's apventure.

Odyssey: The Compleat Adventure™

Trek across the Sargalo Sea, explore islands, caverns, and castles. Gather forces and weapons to defeat the Caliph of Lapour. Three programs, Hi-Res and Lo-Res maps, unending variety and challenges. 48K.

Certificate Maker™

from Springboard
II+,IIe,IIc (64K required)

$29.95 | Code S2S6CM | Ship $1.19

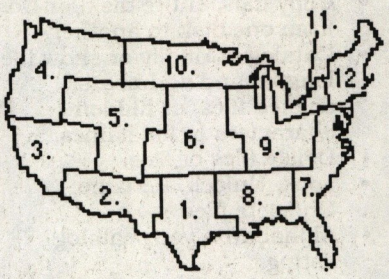
You deserve an award! Choose from over 200 certificate and award formats and 24 borders. Includes 36 gold and multicolored seals for the finishing touch. Plenty of serious and tongue-in-cheek choices! Requires 64K Apple II+,IIc,IIe. Supports most matrix printers, printer cards.

Flight Simulator II Scenery Disks™

subLOGIC Corporation
Apple II+,IIe,IIc, IIGS

Scenery Disk #1
$15.50 | Code S2ASS1 | Ship $.50
Scenery Disk #2
$15.50| Code S2ASS2 | Ship $.50
Scenery Disk #3
$15.50 | Code S2ASS3 | Ship $.50
Scenery Disk #4
$15.50 | Code S2ASS4 | Ship $.50
Scenery Disk #5
$15.50 | Code S2ASS5 | Ship $.50
Scenery Disk #6
$15.50 | Code S2ASS6 | Ship $.50
Scenery Disk #7
$19.95 | Code S2ASS7 | Ship $.50
San Francisco "STAR"
$15.50 | Code S2ASSS | Ship $.50
Japan
$19.95| Code S2ASSJ | Ship $.50

You've logged hundreds of hours on the simulator. You've fine-tuned your navigational skills and are now ready to do some serious cross-country flying. Unfortunately, until now your world was limited to the scenery on the Flight Simulator II program disk. That is until now! Now available from the Co-op is the entire series of FSMII scenery disks.



Available now:

- Areas 1-7
- San Francisco "STAR"
- Central Japan

PaintWorks Plus™

from Activision, Inc.
Apple IIGS

$49.95 | Code SGABPW | Ship $1.00

PaintWorks Plus for the Apple IIGS not only allows you to create amazing pictures in full color but also will let you animate your creations as well. You can use up to 16 colors in a single picture, and you can choose those sixteen colors from a palette that contains 4069 colors in all. You can also create a series of pictures that show an image changing or moving and PaintWorks Plus will animate the series for you automatically. With PaintWorks Plus you can:

- Choose from a total of fifteen tools to paint with.
- Enlarge a section of the picture to work on the details in "Fat Bits" mode.
- Create new patterns at any time.
- Mix colors and patterns at will.
- Add text to your pictures in a variety of fonts, styles and sizes.
- Re-orient pictures or a section of your picture by rotating them or flipping them.
- Cut and Paste images from one part of the picture to another or from one picture to another.

TopDraw™

from StyleWare, Inc.
Apple IIGS

$69.00 | Code SGSTTD | Ship $1.00

The first object-oriented graphics program for the Apple IIGS No longer must we Apple II users drool over the graphics programs that have been available for the Macintosh for so long. TopDraw is here! TopDraw gives you the ability to to create drawings based on shapes or, objects which can be moved, edited or duplicated, giving you limitless drawing potential.

Advanced features allow you to:

- Draw with up to 16 colors at once using color patterns as pen patterns or fill patterns.
- Create your own color pallets for limitless color potential
- Print your creations in color and up to 8 pages in length and width on ImageWriter II
- LaserWriter compatible

TopDraw comes complete with:

- User defined rulers (metric & English)
- Grids, pens, ellipses, rectangles, rounded rectangles, polygons and free-hand objects
- Horizontal, vertical and diagonal lines
- Freeform lines and arcs

UTILITIES/ RECOVERY

Bag of Tricks 2™

from Quality Software
Apple II+, IIe, IIc

$32.00 | Code S2Q1BT | Ship $.88

Bag Of Tricks 2 is a set of four comprehensive disk utility programs that help analyze, modify, and restore disk data. Designed for 5 1/4 " floppy disks, many of its features also apply to 3 1/2 " floppy disks, hard disks, and RAM disks. It will work with all major operating systems used on the Apple II computer (DOS. 3.2, DOS 3.3, ProDOS, Pascal, and CP/M), is not copy protected, and thus can be backed up or transferred to any ProDOS volume. The four programs and their features are:

- TRAX: Dumps and examines a track from 5 1/4 " floppy disk, displays the internal Apple disk formatting information, and flags exceptions to standard formats.

- INIT: Will copy the undamaged parts of one disk to another, even if parts of the original disk are damaged. It will reformat individual tracks of a 5 1/4 " floppy disk, preserving the contents of undamaged sectors. It also allows you to change sector order (skewing).
- ZAP: Is a sector editor like no other! More than 50 commands are available to help locate, compare, change, or print the data on your diskettes. Design your own macro commands. Examine and modify DOS, ProDOS, Pascal, even CP/M files on floppies, RAM disks, and some hard drives.
- FIXCAT: Automates the process of repairing a damaged DOS catalog or ProDOS directories and subdirectory. It operates with or without intervention, locating "lost" files and rebuilding the directory — from scratch if necessary! If it's possible to recover your directory, FIXCAT will do it.

Complete with extensive manual.

Copy II Plus™

from Central Point Software
Apple II+,IIe,IIc (64K required)

$21.95 | Code S2CPY | Ship $.88

Note: Central Point Software is constantly updating and improving Copy II Plus. As a result, we will no longer list the version number in the catalog. We will however, continue to stock the very latest revisions of Copy II Plus as they are released.

Copy II Plus is one of the most powerful backup copy programs available, and is also our choice as the most versatile and comprehensive disk/file manipulation utility program available for the Apple II series computers. The powerful bit copy program in Copy II Plus allows you to automatically back — up over 400 copy protected programs! No more worry about blowing expensive master disks and no more down time while waiting for replacements to arrive. Copy II Plus also allows you to:

- Copy files, entire disk, or Dos from one disk to another.
- Catalog normally or show file lengths and addresses, deleted files, or hidden characters in file names.
- Delete files or Dos.
- Lock, Unlock, Rename, Undelete files.
- Alphabatize your catalog listing.
- Verify disk, files, identical files, and also drive speed.
- View Files see the contents as values or text.
- Track Sector Map shows occupied parts of the disk .
- Sector Editor allows you to directly modify disk sectors.
- Change boot program does exactly that.

Prozap™

by Gary Charpentier
Apple II+,IIe,IIc

$12.95 | Code SPZAP | Ship $.19

This utility uses intrinsic ProDOS routines to read, edit and write any ProDOS block or DOS 3.3 sector all from the ProDOS environment. The disk also contains a utility for dump to disk, printer or monitor, a hex or hex/ASCII listing or disassembly with a search routine for hex or ASCII bytes. Complete with documentation for Prozap only, not ProDOS.

Run Run™

from Pinpoint Publishing
Apple IIe,IIc (128K required)

$25.00 | Code S2P5RR | Ship $1.00

Here is a ProDOS program selector which is compatible with Pinpoint Toolkit Accessories (see AppleWorks Enhancements section). Mousetext characters are used to create a graphics selection environment. The selector saves you from having to type the pathname to run a new application. Applications do not have to be on the same disk volume as Run Run.

Sideways 2.0™

from Funk Software
II+, IIe, IIc

$39.95 | Code S2F2SW | Ship $1.00

Sideways has been around for a long time now, but for the uninitiated, it lets you print your w-i-d-e spreadsheets "sideways" on your standard sized printers. Sideways now prints any DOS 3.3 text file, ProDOS text file, as well as AppleWorks spreadsheet using Sideways is just like working from within AppleWorks with familiar menu styles and "Open-Apple" commands. Sideways works with most printers and interface cards and includes instructions for those not in the list. Other features include:

- Choose from six different font sizes from tiny to extra large.
- Select single or double density printing.
- Adjust margins, page size, line and character spacing.
- Works with most spreadsheet or word processors.

(As of this writing, Sideways is not fully supported on IIGS. It will work with a Parallel or Serial card in one of the slots however, but will not recognize external memory cards.

SoftSwitch™

from Roger Wagner Publishing Co.
Apple IIGS
512K minimum RAM, 3.5" disk drive

$36.95 | Code S2RWSS | Ship $.69

SoftSwitch is designed specifically to take advantage of the extra memory in your Apple IIGS . Imagine being able to switch between 3 running programs on the IIGS with just a single keystroke. Imagine interupting a program at any instant, saving the program to disk in its current state, and then returning to that exact point - even weeks later!

SoftSwitch is implemented as a Classic Desk Accessory on the Apple IIGS . This means that it is available at any time by pressing the Control-Open Apple-Escape sequence that is used to access the Apple IIGS Desk Accessory menu. When SoftSwitch is placed on your system disk, it is automatically installed when ProDOS 16 is started, and the name "SoftSwitch" will appear on the Desk Accessory menu along with "Control Panel", "Alternate Display Mode" and whatever other desk accessories are available in the GS. If the

programs you use on the IIGS allow access to the control panel while they're running then they're compatible with SoftSwitch.

The primary purpose of SoftSwitch is to allow you to install up to three separate, but concurrent, programs, and be able to switch between these applications as simply and quickly as possible. Program switching takes just seconds and the SoftSwitch Display Panel shows a graphic mini-screen of each of the programs you are using
Benefits of SoftSwitch include

- Instantly switch between up to three programs in memory
- Combine the features of several different programs.
- Copy & Paste regular and double Hi-Res screens between certain graphics programs like PrintShop™,FantaVision™, Blazing Paddles and others
- Revert from current program state to an earlier state
- Save the current program state to disk and run it weeks later from the exact point at which you saved it.

PROGRAMMING TOOLS/ LANGUAGES

AMPERmanager Version 2.0™

by Rick Sutcliff
Apple II+,IIe,IIc

$9.95 | Code SAMP | Ship $.50

This popular ampersand utility package works under ProDOS and Dos 3.3 with both versions residing on the same disk! Read or write disk blocks at will in ProDOS, and any Track/Sector pair in Dos 3.3. Over 70 useful utilities including shorthand Applesoft commands, improved input supporting lower case and allowing commas and colons, formatted printing (print using), and many, many more. (See "The Northern Spy" in the July 1984 issue of *Call-A.P.P.L.E.* for further details.)

The Applesoft Carpenter II™

by Wayne Eastwood
Apple II+,IIe, IIc (Dos 3.3)

$9.95 | Code SCAR | Ship $.25

A collection of seven utilities which enhance programming productivity.

- The Lister: Provides formatted listings of Applesoft programs.
- The Comparer: Compares two Applesoft programs.
- The Cruncher: Compacts Applesoft programs.
- The Converter: Converts Integer Basic files to Applesoft.
- The Constructor: Allows Integer Basic to be converted to Applesoft format to provide back up documentation of the original program.
- The Finder: Finds all occurrences of a string.
- The Keeper: Allows you to preserve variables during line editing.

This diskette is a much revised version of the original Carpenter.

Applesoft Program Editor PRO™ (ProDOS and DOS 3.3)

by Richard Hackl
Apple II+,IIe,IIc (64K required for ProDOS)

$16.95 | Code SAPEP | Ship $1.00

The package comes with both versions on disk as well as a full manual with tutorial and a ProDOS addendum. We think you'll agree that it is the best Applesoft editor around. The REM Renumber feature encourages good program structure. A single command allows you to clean up the numbering while keeping the starting line number of each subroutine fixed.

Full-Function Editor: Lets you change a line or an entire range of lines with a few keystrokes. Simply move to where you want to insert or delete and A.P.E. makes space for you. No awkward cursor-tracing needed. Search/replace a letter or phrase. True screen editing within an Applesoft line. Always there when you need it: Monitor, immediate mode, even in a running program!

Enhanced Escape Editing: There are times when the quickest way to copy a phrase is to "ESCape-IJKM" the cursor, trace what you want and hit return. Ever been lost? A.P.E. shows you a copy of the line as you build it! You can use this even in the middle of editing an Applesoft line.

Advanced Renumber: Frustrated by your memory hog renumber program that isn't there when you need it? Did you try renumbering your "Super Big-Boy" program to find that you suddenly rendered your twenty page listing worthless? Now renumber is always there with the editor, all on a modest memory budget. A.P.E.'s Auto-Renumber lets you fix forever the starting line number for each major program section. Change any section, issue the auto-renumber command, and presto! Your line numbering is clean, and your subroutine starting line numbers stay put!

Append: Another feature of renumber, makes it easy to bring in subroutines from a library or merge two program segments together. A.P.E. takes care of the mechanics, now you can concentrate on producing good program structure.

Quick type: Save keystrokes. For example, you may define "ESC 1" to mean "CATALOG,D1". Whenever you type "ESC 1", Quick-Type takes over and catalogs the disk. If you prefer, just use the predefined Quick-Type functions.

Compatibility: We're honest. Integer BASIC is not supported. Works with Videx Videoterm and Ultraterm, Vision 80, Viewmaster 80, Viewmax 80, IIc and IIe 80 column cards.

Applesoft Program Editor DOS 3.3™

$16.95 | Code SAPE | Ship $1.00

Same as above without ProDOS version.

Grafmagic™

by Stuart Cowen

Apple II+,IIe,IIc
$4.95 | Code SGRAFM | Ship $.25

GrafMagic is an ampersand extension to Applesoft BASIC offering 64 new commands as well as a powerful Hi-Res character generator. Commands are included to scale, rotate, invert, erase, copy, scroll (in four directions), fill in, and flip selected portions of the screen. Other features include an implementation of Turtle Graphics, which allows up to five "turtles" to be moved independently, a sound generator with true-to-pitch notes, a number of interactive tutorials. The character generator can print text of any size ranging from normal up to full screen and will support underlined, boldface, inversed, super or subscripted and upper or lowercase characters.

Kyan Pascal ™
from Kyan Software
$49.00 | Code S2K2KP | Ship $2.00

A ProDOS, 6502 code-generating Pascal for learning or development, Kyan is a full implementation of ISO Pascal level 0, and will run on any Apple II with 64K. It features command menus, help screens and several libraries of error messages. It also comes with a comprehensive 300 page manual including a complete Pascal tutorial and users guide. Its Programming Toolkit gives development power. Full screen editor. Built-in macro assembler lets you add assembly code in-line. Not copy protected. Royalty free license to use the Runtime Library with software you develop. String support is limited. Not compatible with Apple IIGS native mode.

Maxwell's Demon™
by Duane Maxwell from Enhanceware™
Apple II,II+,IIe,IIc
$29.95 | Code SDEMON | Ship $1.00

This unique DOS 3.3 based machine code debugger has learning aids for the novice programmer, yet it includes all the tools needed by the expert. Beginners find that the display of every memory cycle's effective address and data makes it easy to understand every instruction. Even the stack oriented commands and the complex addressing modes become easy to follow. The well organized screen displays all registers, cycle counts, and a listing (including symbols) of the five instructions surrounding the current Program Counter. Expert and novice alike appreciate the easy to use commands which allow you to:

- Single step or free run.
- Follow the effect of each instruction as it executes.
- Set breakpoints — even in ROM!
- View Text or Graphics screens.
- Modify any register or flag.
- Examine and modify memory.
- Simulate a Reset, NMI, or IRQ.
- Manipulate the Stack.
- Edit the symbol table.
- Execute Dos commands.
- Execute user code.
- Remap memory, freeing the program to run anywhere and to use any display screens.

If It Doesn't Work — Undo It!

Usually when you detect a bug in a program, it's too late; the damage has been done. But with Maxwell's Demon™ you can simply unexecute the last instruction executed. In fact, you can step backwards up to 16 instructions!

Unexecute doesn't just back up the Program Counter. Everything that had been changed by the execution of the instruction(s) is restored to its original state!

Code can be executed, unexecuted and re-executed as many times as needed until the bug has been found and fixed.

Maxwell's Demon™ also includes:

- A fully symbolic calculator, mini-assembler and lister.
- A mode for fast execution of previously debugged code.
- Symbolic operation with any object code — even in ROM.
- The ability to breakpoint on any desired combination of conditions; catch your program before it clobbers itself or the operating system — or before it jumps to the wrong address.
- A "help" command gives a description of each command.

A utility program is included which "grabs" the symbol table after an assembly with Big Mac.C or Merlin™ (ram card version). For use with other assemblers, or when only object code is available, the symbol table may be entered directly, or you can create your own symbol table grabber. Any symbol table may be saved to disk for later use.

The 110-page manual gives a very detailed description of each command, step-by-step procedures, many examples, tips on isolating certain bugs and entering patches, as well as other time saving techniques.

Maxwell's Demon™ runs under standard Dos 3.3 on any Apple II II+, IIe, or IIc with at least 48K and one disk drive. It supports all 6502 and 65c02 instructions. Source code is even available for hackers who want to make their own modifications.

MerlinPro™
from Roger Wagner Publishing
Apple II+, IIe, IIc
$69.00 | Code S2R6MP | Ship $.75|

Merlin Pro is an extremely powerful, comprehensive Macro Assembler system for the Apple IIc and 128K Apple IIe. With all of the regular features of Merlin (Big Mac.C), this professional version also offers additional enhancements for the serious programmer working in either DOS 3.3 or ProDOS. The Merlin Pro system consists of four integrated, co-resident modules plus many auxiliary and utility programs. The four main modules are:

- Executive System: For Disk I/O, File management,ProDOS interpreter, etc.
- Editor System: For writing and editing programs with word-processor power.
- Assembler System: With such advanced features as Macros, Macro libraries, conditional assembly, linked files, etc.
- Linker System: For generating relocatable code modules, library routines, run-time packages, etc.

Other features include:

- Assembles programs written for the 6502 and the 65C02 microprocessor as well as for the 65802 .
- Comes with versions for both DOS 3.3 and ProDOS.
- Recognizes over 50 Pseudo opcodes for extreme programming flexibility.
- Includes a complete commented disassembled listing of Applesoft BASIC.
- Merlin Pro is unlocked and copyable for your benefit!

Mon+ Symbolic Debugger for ORCA/M™

ByteWorks,Inc.
Apple II+ (64K), IIe,IIc
$23.95 | Code S2B3SD | Ship $1.00

MON+ supports forty commands for debugging ORCA/M assembly language programs. You can trace programs step by step, or let particular subroutines run at full speed. A disassembler lets you examine the program as you debug it. MON+ also lets you assign names to locations, so that you can use the same symbolic names when debugging a program that were used when the program was written. When an error is found, you can often fix it from MON+ using either hex numbers as with the Apple monitor, or with a powerful built-in mini-assembler.

ORCA/M For the Apple IIGS™

from ByteWorks, Inc
$54.00 | Code SGB3OM | Ship $1.38

ORCA/M is a complete development environment for assembly language programming on the Apple IIGS. The system includes the assembler with full macro capabilities, link editor, command processor, full screen text editor, and complete subroutine library support! The operating environment included with ORCA/M is fully a development environment for any compiler or accessory that is compatible with APW. Features include:

The Assembler
Assembler up to 5000 lines per minute. Supports 6502, 65C02, and 65816. Supports partial assembly for even faster turn around of corrections. Upward compatible with ORCA/M 4.0 for eight bit Apple computers. Full macro capabilities including:

- Macro libraries.
- Global communications between macros.
- Pass strings to macros.
- Macros can call macros.

The Command Processor

- UNIX-like I/O direction.
- Based on ProDOS 16.
- Advanced EXEC files with ability to Call other EXEC files, Pass parameters to EXEC files, Complete conditional execution, language making it possible to program the command processor.

The Editor

- Full screen text editor.
- Search and Replace.
- Cut, Copy, Paste and Delete blocks of text.

The Link Editor

- Automatic library searching.
- Creating over layed programs.
- Link multiple input files (for UNIX-style separate compilation).
- Symbol tables limited only by memory.

The Libraries

- Formatted input and output of numbers and strings.
- 2, 4 and 8 byte integer math including Add, Subtract, Multiply and Divide, Square root and random number generation.

ORCA/M 1.0 Source Code Library™

ByteWorks, Inc.
Apple IIGS
$29.95 | Code SGB3OS | Ship $.50

Contains the source code to the ORCA/M subroutine library, including integer math, formatter I/O, number-string conversions, etc. All are called via the standard macro library. The over 3000 lines of 65816 code show you haw to write your own libraries, or understand and/or modify ORCA's. Compatible with APW.

ORCA/M 4.1 Macro Assembler™

from Byte Works, Inc.
Apple II+ (64K), IIe, IIc
$63.95 | Code S2B3OM | Ship $1.00

ORCA/M 4.0 is a complete development environment for assembly language programming for ProDOS and is the first assembler to fully support the new 65816 CPU. Also supports 6502, 65c02, 65802.

- Assembler with macros.
- Link Editor.
- Command Processor.
- Full Screen Text Editor.
- Disassembler.
- Macro and Subroutine Libraries.
- 2,4,and 8 byte integer mathematics.
- Full graphics library including double Hi-Res.
- Many utilities.

ORCA/M 4.1 O/S Source™

from Byte Works, Inc.
$31.95 | Code S2B3OS | Ship $1.00

ORCA O/S source consists of four disks packed with source code for key parts of the ORCA/M system. The source listings for the operating system, the subroutine libraries, and the XREF utility are included. With the operating system source code you may add drivers for hardware that is not currently supported by ORCA, and cause ORCA to automatically load the drivers. It is also possible to configure clock cards for slots other than #2. The subroutine library source code lets you customize the library functions, as well as explore them for a more complete understanding of the system.

ORCA/M 4.1 Floating Point Libraries ™

from Byte Works, Inc.
$31.95 | Code S2B3FP | Ship $1.00

The ORCA/M Floating Point Libraries include macro and subroutine library support for IEEE format single and double precision numbers. Operations include add, subtract, multiply, divide, sine, cosine, arctangent, natural log and exponent, formatted input and output, square root, absolute value, sign function, and conversion between floating point and integer

numbers. Source code is included. (Requires ORCA/M.)

ORCA/EZ™

from Byte Works, Inc. and Grynberg Publishing Corporation
Apple II+, IIe, IIc

$24.00 | Code S2G5EZ | Ship $1.00

For entry level 6502 assembly language programmers, or those not needing the full ORCA/M we offer ORCA/EZ. This DOS 3.3 version consists of a disk with the ORCA Operating System, Monitor, Editor and Assembler packaged with *The Assembly Book*. This 500+ page 6502 programming tutorial contains many illustrations, example problems (and solutions!). Not only is The Assembly Book an excellent reference/tutorial to assembly language, it is also a good introduction to the ORCA programming environment.

ProCMD — The Commander™

by Glen Bredon
Apple II,II+,IIe,IIc (64K required)

$12.95 | Code SPROCO | Ship $1.00

From the author of BIG.MAC.C (Merlin), the ProCMD package is a set of ProDOS utilities and *new* ProDOS commands that greatly increase the power and flexibility of the ProDOS operating system. Those who have used the ProDOS *Filer* know the agony of having to enter (one by one!) the pathnames of the files chosen to copy. No more! Included on the ProCMD disk is the file utility Fite for batch processing (copy, lock, unlock, and delete) of selected ProDOS files. ProCMD adds 25 new *powerful* Applesoft and Dos commands to the ProDOS Basic.System. The list of new commands includes:

Applesoft

- Pointers: Lists the current values of seven important Applesoft pointers.
- VARLST: Lists all currently active variables.
- VARTRC: Trace the current value of a \selected variable.
- XREF#: Shows what variables are being used and where in your program.
- Dump: Hex/Ascii memory dump of any ProDOS file including directories.
- Sort: Sorts single or multi-dimensioned arrays on multiple fields.
- Edit: Provides a full featured, global Applesoft BASIC program editor.
- Auto: Provides automatic line numbering for Applesoft programs.
- Remember: Renumbers your Applesoft programs.
- Hold/Merge: Adds one Applesoft program to another.
- Lyst: Produces a formatted listing of the program in memory.
- Using: Will output data in the format of your choice.
- Macro: Invokes a set of keyboard macros used with Edit.

ProDOS

- Online: Looks at all online drives and prints names of all volumes found.
- Type: Dumps ProDOS TXT files.
- Find/Find$: Searches disk files of any type for specified character or HEX string.
- Copy: Copies file PATHNAME1 to file PATHNAME2.

Also included are commands to conveniently handle plotting, animation, color fills, character generation, and mouse/cursor movement on the IIc/IIe double Hi-Res screen.

TML Pascal for the Apple IIGS™

from TML Systems

$99.00 | Code SGTAPW | Ship $.81

TML Pascal has been designed to meet the needs of the broadest range of programmers possible for the Apple IIGS TML Pascal has numerous extensions for programmers accustomed to other Pascal implementations, thus achieving the greatest amount of compatibility possible.

Compatible with either the Apple Programmer's Workshop (APW) or ORCA/M 11.0 for the IIGS, TML Pascal supports units, random disk I/O, and standard subprograms such as Moveleft, Fillchar, etc. that are found in UCSD implementations of Pascal such as Apple Pascal. And of course language features from the Macintosh version of TML Pascal such as type casting, bit operations, CYCLE and LEAVE statements, Unit bodies, and much more are found in TML Pascal for the Apple IIGS.

- Full access to entire Toolbox.
- Runs in full 16-bit native mode under ProDOS 16 and APW (ORCA/M).
- Allows you to develop Stand alone ProDOS 16 applications, New Desk Accessories, APW tools, Create definition procedures.

TML Pascal Source Code Library™

from TML Systems
Apple IIGS

$65.00 | Code S2TMSL | Ship $1.00

A complete collection of TML Pascal source code example applications demonstrating the use of the IIGS ROM Tools. Examples include: QuickDraw graphics, menus, printing, windows, standard files, dialog and alerts.

ZBASIC™

from Zedcor

$69.00 | Code S2DZBS | Ship $1.00

We have extended the introductory price on this compiled Basic running under DOS 3.3. Requires IIc or 128K IIe. See the March 1986 review in *Call-A.P.P.L.E.*

PUBLIC DOMAIN SOFTWARE

$2.00 | Code SPDS | Ship $1.00

A Separate catalog of Public Domain Software is available for $1.00. The current catalog contains several hundred listings: utilities, graphics demos, Eamon adventure games, and more.

When ordering PDS disks, please specify the volume numbers. Please note: We do not accept returns on PDS disks other than to recopy bad disks.

TELECOMMUNICATIONS

Modem.Magician 5.13 New Version™ *Good Buy!*

by Gary B. Little
Apple II,II+,IIe,IIc,IIGS

$38.00 | Code SMODMA | Ship $1.00

Modem Magician is the first full-featured, intelligent terminal program to be published under the A.P.P.L.E Co-op label. Modem Magician is a comprehensive inter-computer data communications software system for the Apple II, II+, IIe, IIc and compatibles. It allows you to easily send and receive text by phone with remote computers, including services such as *The Source* and *Compuserve*, computer bulletinboards, or other personal computers equipped with modems. Utilities are included to convert Applesoft, Machine Language, and Pascal files for transmission. Modem Magician works with most popular stand-alone modems and modem interface cards including the Cermetek Applemate modem, Apple Modem, Prometheus Promodem, Multitech Multimodem IIe, Hayes Micromodem, Hayes Smartmodem, Novation Apple-Cat II (300 baud only), U.S. Robotics Password Modem, Signalman Mark XII, SSM Apple ModemCard, Apple Super Serial Card, Videx PSIO Card, CCS Model 7710A Card, and SSM ASIO Card. Features include:

- No word splitting when receiving text.
- Ability to enter all 128 ASCII characters from Apple II, II+ keyboards.
- Full support of all lower case adaptors for II and II+. Support of 80-column video displays: Videx Videoterm with softswitch, Apple IIe 80-column Text Card, Apple IIc.
- Built-in text editor, phone number editor and macro editor.
- Built in filing system allows you to easily save, load,delete and rename system text files.
- Automatically saves incoming data to disk when memory buffer becomes full.
- Auto-Answer mode allows you to leave computer unattended.
- Simultaneous on-line printing when using most printer interface cards.
- XMODEM error-checking protocol for accurate transfer of ProDOS files.
- Works great with AppleMate 1200!

See the update description below for additional information.

Modem.Magician 5.13 Update™

$12.50 | Code S2A1MU | Ship $1.00

Modem.Magician ver.5.13 improves on old features and adds some brand new ones including:

- New ESC-shift sequence commands in communications mode.
- ProDOS version allows you to send standard text files directly from disk.
- New full 80-column text editor.
- The delete(IIe-IIc) key is now recognized.
- CTRL-E (and Apple-E: IIe-IIc) now used to switch between insert and overstrike mode with corresponding cursor.
- CTRL-R can now be used to restore an edited line (in text editor) to its original state.
- Print a file directly from disk the new *type* command.
- Enhancements to the macro system including a "wait for character" and "link to other Macro".

New utility programs have also been added such as the "type install" which installs the type command, ML.Start which will display the starting address of a previously Bloaded binary file - for use when converting a binary file to text for uploading, and LF.Strip which will remove all Line-Feed characters from a given file.

You must send your original program disk to A.P.P.L.E. when ordering the update. A sixteen page update manual is included with the new program disk.

MouseTalk™

from United Software Industries
Apple IIGS, IIc,IIe (128K enhanced required),
Mouse strongly recommended; no Versacard support.

$69.95 | Code S2U1MT | Ship $2.00

ASCII Express MouseTalk stands on the shoulders of a giant: ASCII express, and it shows! It has terminal emulation, XMODEM, macros, and review of the last 8,000 characters of your terminal session, especially handy when you forget to direct the incoming text to the editor or a file. It uses all the Maclike features which make learning a new program easier: pulldown menus, text windows, scroll bars, the works done on the text screen using mousetext characters. A "help" command is available for most situations. The full-screen editor is responsive and easy to use, and with its 32,000 character capacity is really a mini word processor. You can insert text at any point, even change the line length for the entire document. (You must manually issue a "fill" command which reformats the entire document.)

The program shows good attention to detail at every turn. Type an illegal space in a file name and MouseTalk supplies a legal dot in its place; key in an existing file name and it highlights it in your selection window. And what a joy it is to see all the file commands available within the program: Catalog, Rename, Delete. Hats off to USI. MouseTalk performs with a level of snap and speed which can only be accomplished by much careful low level hand coding and optimizing. If you use a mouse, you'll probably want this modem program.

Point-To-Point™

from Pinpoint Publishing
Apple IIc,IIe (128K enhanced required)

$65.00 | Code S2P5PP | Ship $1.00

Deep down underneath, Pinpoint is an updated Modem Magician but with an AppleWorks-style file card menu system. Other enhancements include pop-up disk directories, better macros with conditional branching and looping. File type conversion is easier and AppleWorks word processor and MousWrite files can be read directly. Also includes extended Xmodem Protocol for sending and

receiving batches of files. Most 300/1200/9600 baud modems are supported as well as 9600 direct connect.

ProTERM™

from Checkmate Technology
IIGS, IIe, IIc

$79.95 | Code S2C1PT | Ship $1.81

Introducing possibly the easiest to use and most powerful telecommunications package to hit the Apple II market in years! ProTERM allows you to select from large lists of serial cards and modems for effortless no-hassle installation. Choose the IIGS by name and have instant installation on the internal serial port. The installation is just as easy on a IIe or IIc. All popular serial cards and internal/external 300,1200 and 2400 baud modems are supported with one-key selection.

ProTERM's AUTOLEARN feature creates powerful macros by recording your actions while you work. This capability allows you to record tedious log-on procedures and replay them with a press of a key. ProTERM supports all modern data transfer protocols including XMODEM, XMODEM (DOS/ProDOS), XMODEM CRC, YMODEM, KERMIT, and others. Other features include:

- On-line help screens available at any time.
- Unwanted characters filtered out automatically.
- Easy terminal emulation includes DEC VT-52, Televideo 950, Datamedia, Heathkit H-19, Haseltine 1500, LSI ADM-3A.
- Batch sending mode allows you to transfer entire disks including Operating systems!
- ProDOS clock support including ELAPSED TIME counter.
- Phone number list handler.
- Option to save captured text as lines, as paragraphs or single long piece.
- AUTOLEARN macro builder saves time and money.

WORD PROCESSING

The Bard's "ProAm" Apple IIe/c Writing System™

from Writing Software International

$54.95 | Code S2W5BW | Ship $.75

The Bard's "ProAm" Writing System is a superb value as a writing tool for the whole family, not just for the advanced user. For the computer/word processing novice "The Bard" comes with an interactive animated tutorial to acquaint you with the terminology and uses of the word processor. Then move on to the Bard's Apprentice program which contains two levels i.e. the Starter's level and the Experienced level. Here you come to an even better understanding of the program and begin to utilize the Bard's powerful features. Once comfortable with the program or if you just want to jump right in and begin using the full power of the "The Bard", there is the Bard's Professional level word processor. Combine this with the 50,000 word built-in spell checker and we think you'll be extremely pleased with this word processor. Features of The Bard's "ProAm" Writing System include:

- ProDOS based.
- 50,000 word user modifiable spell checker.
- Easy to set up with 30 printers pre-programmed
- On-line Help.
- Easily convert files from other word processors
- "Quick Insert" Macro capabilities.
- Search and Replace.
- Cut and Paste.
- Set tabs from menu or graphically.
- Easily uses Typesetting features i.e. font size, style, underlining etc.
- Typewriter mode.
- Hide/Show carriage returns.
- Load/Save text files.
- Restore last cut or operation.
- Not Copy protected.
- Easy to use, full featured and easily affordable!

Document Checker™

from Pinpoint Publishing
Apple IIc,IIe (128K required)

$35.00 | Code S2P5DC | Ship $1.00

For long documents, reports and contracts, Document Checker checks up to 16 documents in sequence at 30 to 150 words per second. Contains the same 61,000 word dictionary, and personal dictionary as the Pinpoint Spelling Checker.

MicroWriter II+™ *Good Buy*

by Bill Starbuck
Apple II+

$12.50 | Code S2UWTR | Ship $.13

Requires II+ with shift-key modification and a lower case chip and at least one disk drive. Compatible with Videx Videoterm and most other 80-column cards.

Here is a semi-professional screen oriented word processor for all but the most demanding user. Features 40 or 80 column edit modes, an 80 column preview if you edit in 40 columns. MicroWriter is an easy to use word processor and will satisfy the requirements of most users. Requires an Apple IIe and one disk drive. Supports additional drives and a wide range of printers and 80 column cards. Apple IIc compatible.

- Outstanding software value!
- Cut and Paste up to 1024 characters at a time.
- Insert segments to disk — Save segments to disk.
- Search — Search/Replace.
- On screen preview of text before printing.
- Reads and Generates standard DOS 3.3 text files.
- Full IIe keyboard support.
- Text insert,delete, and move.
- Printer drivers included for: ImageWriter, C.Itoh 8510A, Dynax DX-15, Epson FX-80, MX-80 w/Graftrax, Tally, MT160,Tally Spirit-80, Nec 8023A, and Panasonic.
- Instructions included to write custom printer drivers.

MultiScribe GS™

from StyleWare, Inc.
Apple IIGS

$65.95 | Code SGSTMS | Ship $1.19

Multiscribe offers a new level of word processing by taking advantage of the features of the II GS. It is a fully windowing and mouse driven piece if software.

SOFTWARE CONTINUED

Features include:
- Full font support .
- Multicolor text.
- Multiple documents can be edited at the same time.

Features on the way:
- Mix graphics and text.
- Support for other printers besides the ImageWriter II.

Power Print™
from Beagle Brothers
Apple II, II+, (64K), IIe, IIc, IIGS
$24.00 | Code S2B1PP | Ship $.75

Power Print software lets you "download" a second typestyle into your printer so you can print both your standard font and a custom font with special characters. many custom fonts are included on the Power Print disk. An easy-to-use font editor lets you redesign any character in any font. Your printer's special effects (condensed type, expanded, bold, etc.) will work with both standard and custom fonts. After loading a custom font into your printer just boot AppleWorks, AppleWriter, ProDOS, DOS 3.3 or absolutely any program or software that you want — and custom printing is yours. Power Print works on most dot matrix printers with full font downloading capabilities including:

- Apple DMP
- Apple ImageWriter I & II
- Epson (FX, JX,EX)
- Okidata (92, 93, 192, 193)
- Panasonic (1092, 1093)
- Star (Delta, Gemini, Radix, SD, SGSR and many others)

AUDIO CARDS

SuperSonic Digitizer™
from MDIdeas
$46.95 | Code H2M5DG | Ship $1.00

The SuperSonic Digitizer is a Sound input card for SuperSonic IIGS stereo card. With it, you can use the Apple IIGS 's sound the way it was meant to be with the SuperSonic Digitizer. Input instruments, music, voices, sound, anything you choose to hear into the IIGS 's powerful Ensoniq sound chip. Then edit, record, playback and save you audio samples.

Supersonic MultiChannel Digitized Stereo Card™
Apple IIGS
$49.00 | Code HGM5SC | Ship $.50

Enjoy true stereo sound on your Apple IIGS with this new board from MDIdeas. SuperSonic plugs into any slot without disabling the corresponding internal port. It will produce stereo output from any software that addresses stereo through the Ensoniq chip, such as Electronic Arts® Music Construction Set™, and GreatWave Software's KidsNotes™, and ABKey™. Features include:

- Creates spectacular sounds and utilizes the new Ensoniq chip of the Apple IIGS .
- High Speed Analog Demultiplexing circuitry separates audio into two separate channels for true stereo sound.
- User selectable power output levels for either speakers or headphones.
- Two .5 watt amplifiers can directly drive 8Ω speakers.
- Line level outputs for connection to external stereo amplifiers.

CLOCK CARDS

Clockworks Clock Card™
$85.00 | Code H2M7CW | Ship $1.00

Clockworks Clock Card from Micro Systems Research
Do you need a good reliable clock card to time and datestamp your ProDOS files on your Apple II+ or IIe? Clockworks does this automatically at the best price around. Oh yes, it keeps track of leap years, has sample programs in DOS 3.3 and ProDOS, displays date and time on AppleWorks screens and files, and supports interrupts. Five year warranty. Good deal!

DISK DRIVES/ CONTROLLERS

CMS Compact SC20-A2S Megabyte™
from CMS Enhancements, Inc.
Apple IIGS , IIe
$675.00 | Code H2C620 | Ship $11.56

Hard Drive with SCSI interface card. This is a fast, quiet, reliable hard drive which can be used with the ProDOS operating system. The design of the housing and rugged mounting of the drive adds maximum protection against head crash. The heads park instantly each time the power is turned off protecting against loss of data. Included with each system are SCSI utilities which allow users to format, initialize, install drivers, check the condition of the SCSI bus, test the drive and to search the bus for the number of SCSI devices online.

- Non-operating shock rated to 40g.
- External SCSI "ID" select switch.
- 65ms average access time.
- Vented cabinet requires no fan.
- Lightweight and compact.
- Fold-away carrying handle for moving.
- Easy to use SCSI utilities.

E.C. (Economical Controller)™
$40.00 | Code HDCC | Ship $1.00

A low-priced disk controller card that is 100% Apple compatible. Two drive connections, boots DOS 3.3, ProDOS, Pascal and CP/M.

Hi Tech 5-1/4" GS™
from Hi Tech Peripherals
Apple IIGS , IIe, IIc
$169.00 | Code H2H2DR | Ship $4.00

These inexpensive drives are 100% compatible with your Apple Computer. They daisy-chain off the IIGS SmartPort, your Apple IIc or the UniDisk ControlIer IIe. Each drive allows another drive to chain off it. Therefore, you can use all the capacity of you Apple IIGS.

Maple Technology 5 1/4" Disk Drive™
$99.00 | Code HTECDR | Ship $5.00

This great value in a half-height drive has proven reliable and quiet in our tests.

Universal Disk Controller from Central Point™ Software
$89.95 | Code H2C3UC | Ship $1.25

For use with Apple II+, IIe, IIGS and Laser 128 computers, this drive controlIer is compatible with virtually any floppy drive made for Apple II or Macintosh computers: directly accepts Macintosh 400K and 800K external drives, Apple Unidisk 3.5's, and standard Apple compatible 5 1/4" drives. Comes complete with cables so you can mix any two drives of your choice. Compatibility: No daisy-chaining support.

FANS

Sunon Cooling Fan™
from Sunonwealth Electric Machine Industry Co. Ltd.
$15.95 | Code H2T2FN | Ship $2.63

Avoid a case of summer computer flakies or meltdown! Well, we haven't really seen the latter, but overheating can be a problem. Attractively styled to match your Apple II+ or IIe, this fan effectively carries away the extra heat generated by a full house of peripheral cards. Simply slip the fan down over the cooling slots on your computer. A convenient lighted power switch on the front controls the fan, your Apple, and two outlets for your printer and monitor. A limited surge suppression circuit of the low-pass filter type is built in.

Super Fan II™
$59.00 | Code HFAN | Ship $3.00

Zener-Ray transient voltage suppressor and power filter squelches spikes up to 6000 Amps (even those caused by lightning) while responding up to 100 times faster than the Apple built-in filter. Removes air at 17 cubic feet per minute. Unit has lighted switch in front, two accessory plugs in rear and clips to Apple II, IIe or monitor stand. The convenience and the efficient temperature stabilization will make your Apple last longer.

JOYSTICKS

Mach III Joystick™
CH Products
Apple II+
$38.00 | Code HJMACH | Ship $.75
Apple IIe
$38.00 | Code HJOMA3 | Ship $.75

CH Products joysticks are highly accurate and reliable positioning control used for games, business and graphic applications. These controls, engineered with a new slide switch spring disconnect feature, require no stick deflection. The rotary extra-fine electrical trims, which are four times more precise, truly put them in a class by themselves.

- Two switch selectable operation modes; "spring centering" and "positive true positioning."
- Quick fire button on stick.
- Two quick fire buttons on deck of control.
- Electrical trim adjustments for each axis.
- Stainless steal ball as main pivot.

MK VI Joystick™
from Gravis Computer Peripherals, Inc.
$39.00 | Code HGENG | Ship $2.00

The Gravis MKVI is an excellent arcade "pistol grip" style joystick for gaming on the Apple II. This rugged joystick is built to last through countless hours of use and is backed by a one year limited warranty from the manufacturer. Features include:

- Metal re-enforced foam padded, pistol grip handle with integrated fire button.
- 8 position adjustable centering spring tension: free floating to very strong self-centering
- Three independent fire buttons
- Full hand height stick
- Tamper proof trim adjustments
- Full 1 year limited warranty from manufacturer.

Joystick Adapter™
Apple II, II+
$3.00 | Code HGENGA | Ship $2.00

MEMORY CARDS

As with all products in this catalog, prices of Memory Cards are subject to change without advance notice.

Apple IIe 80 Column, Extended RAM Board™
$49.00 | Code H8OC | Ship $.50

Quality board for the Apple IIe *only*. RAM board contains 64K of memory and uses standard Apple protocol.

AP RAM 16K™
$60.00 | Code HP 16 | Ship $.50

Plug in another 16K of memory to your 48K Apple with our economical 16K RAM card. Quality-made card plugs into slot 0 of your Apple and provides extra memory for loading the alternate BASIC language, Pascal, CP/M, moved DOS, ProDOS and various applications.

A.P.P.L.E. Big Board™
Compatible with Apple II, II+, IIe
$159.00 | Code HB256K | Ship $2.00

A third generation memory card that gives you both great expandability and great versatility at an extraordinary price. Thanks to a low power design, even the 1 megabyte configuration draws less than 470 milliamps of power.

Versatility to users means that Big Board is compatible with software written for the Synetix SSD (Flashcard) as well as for the Prometheus 128K card. Our Spreadsheet Version 2.0 already adds 256K to the space available for its worksheets. Compatible with PlusWorksXM for running AppleWorks on the Apple II. Versatility also means that Big Board comes complete with RAMDisk software for DOS 3.3, ProDOS, Pascal 1.2, and softcard CP/M.

Versatility to programmers means that you can choose the active addressing mode both via a jumper on Big Board or through software commands. Choose the mode that is most convenient for you in developing your application. The byte addressing mode has no conflicts with your use of the standard language card or IIe auxiliary slot memory card. The bank switched addressing mode shares the language card area and serves you well as a location for running code. Comes with 256K installed. User-upgradeable to 1 megabyte.

Bigboard — PCPI Applicard (Starcard) Driver™

$25.00 | Code SBPCPI Ship $.19

Great for speeding up Wordstar paging or handling that large dBase II database. Requires PCPI CP/M ver 2.0 (STARCP/M Ver 2.0) with INSTALL.COM Ver 2.7. (Other versions may be compatible but you are on your own! PCPI CP/M Upgrades currently available only through Personal Computer Products Customer Relations for $50 Arghh!... but with completely rewritten manual.)

GSRAM (256K)™

from Applied Engineering
Apple IIGS
$139.00 | Code HGAPGR | Ship $1.00

Simply plug GSRAM into the IIGS memory expansion slot and you've got from 256K up to 8 megabytes of RAM at your fingertips - all of it instantly and automatically recognized by the GS. GSRAM has 6 RAM banks instead of 4 so there's room for 1.5 meg on the main board. And GSRAM is low in power consumption. A fully expanded GSRAM operates at only 375 ma even with 6 megabytes on board! Add the optional ROM expansion module and you can even increase the IIGS 's ROM space all in one slot. Other features include:

- Expands AppleWorks' internal memory limitations.
- Compatible with all IIGS software.
- Fully socketed and user upgradable.
- ROM expansion port.
- Built-in self-diagnostic software.
- Ultra fast dynamic disk caching in both ProDOS 8 and ProDOS 16.
- 5 year warranty.

MultiRAM RGB™

by Checkmate Technology
$149.00 | Code HM64V | Ship $1.00

An Apple IIe with the Checkmate Technology MultiRam™ RGB Card can be expanded to provide 6 Megabytes of RAM.

- RGB Apple Video Output: MultiRam™ RGB provides full-color RGB Apple video output.
- 100% Apple compatible: This card doesn't even take up an expansion slot! It takes the place of the standard 80 column card in the auxiliary slot.
- Apple Works power: The MultiRam™ RGB Card has a 65C816 CPU Port allowing the IIe to run all existing Apple programs as well as incredibly powerful 16-bit software such as the Lotus 1-2-3 work alike, VIP Professional. This CPU can directly address up to 16 Megabytes of RAM.
- Built-in 65C816 CPU Port: Imagine a desktop measured in Megabytes allowing huge databases and spreadsheets. Load AppleWorks completely into RAM for instant response.
- ProDOS Memory Partitioning: The MultiRam™ RGB's memory can be partitioned to create directories and subdirectories, thereby eliminating the need for a second disk drive for many programs. The optional battery RAM can be used as extra memory or as a super fast disk drive that is reliable even if the power is interrupted. The battery backup allows you to keep the most commonly needed programs and files in memory, ready for instant use.
- Memory Capacity: The MultiRam™RGB Card comes with 64K of DRAM and can be expanded up to 1 megabyte. Optional Static RAM can add up to 2 megabytes. Optional MultiRam + Card can add an additional 3 megabytes. A fully expanded MultiRam RGB Card provides 6 megabytes of memory.
- 5-Year Warranty: The MultiRam™RGB is made in the U.S.A. and backed by a 5-year warranty.

Note: Options may not be available through A.P.P.L.E. Co-op.

Major Brand Dynamic RAM Chips!™

Prices approximate:
$Call | Code HCHIP8 | Ship $.19 | 256K, 150 ns, set of 8 chips

OctoRAM™

from MDIdeas, Inc.
Apple IIGS

1 Megabyte board (W. 256K SIMM's)
$279.00 | Code H2M501 | Ship $.75

2 Megabyte board (W. 256K SIMM's)
$489.00 | Code H2M502 | Ship $.81

The ultimate IIGS memory expansion card. OctoRAM comes with 256K yet can easily be upgraded to 8 meg on a single card. OctoRAM utilizes SIMM technology so there's no piggy backing necessary, no new card necessary when upgrading memory, no hassle, no confusion. Simply plug it in and go. NOTE: you cannot mix 256K and 1 meg

SIMM's.

OctoRAM SIMM Packs™

SIMM 256K/120 Nanoseconds
$ Call | Code H2M5SK | Ship $.50

SIMM 1M/120 Nanosecond
$ Call | Code H2M5SM | Ship $.50

OctoRAM ESP™

from MDIdeas, Inc.
$159.00 | Code H2M50E | Ship $.81

Anyone with a IIGS knows that booting a new application disk signals the time to go mow the lawn, make a pot of coffee, make out a shopping list, anything that will help kill time until the program is actually up and running. it might not be all that bad, but if you're tired of waiting for your programs to boot, then here is a possible solution.

OctoRAM ESP (Extended Static-ram Pack) is an add on board to MDIdeas OctoRAM memory expansion card for the IIGS. It stores up to 512K of programs for instant access. Store AppleWorks, Visualizer IIGS, the IIGS desktop, ProDOS, or virtually anything you want for immediate access. Imagine booting AppleWorks in 1.5 seconds!

The IIGS sees OctoRAM ESP as a bootable ROM disk, therefore, you can use it as the startup device. You can also treat it as a normal disk drive, thus transferring and accessing applications in the usual way. It even has a write protect switch. Your programs and data are always in RAM, backed up by a rechargable ni-cad battery with a 10 year life. Retains memory with power off for six months! See the access times (in seconds) below for a comparison between OctoRAM ESP, a 3.5" disk drive and a 5 1/4" drive.

Operation	ESP	3.5	5.25
Boot directly to AppleWorks	1.5	13	14
Save 59K text file	3	13	35
Load 59K text file	4	18	32
Mail Merge 85K file	30	57	n/a
Boot to IIGS Desktop	10	55	n/a
IIGS Desktop to AppleWorks	<.5	6	n/a
Preload AppleWorks to RAM	2	18	24
Quit to IIGS Desktop	4	16	n/a

The ESP uses Static RAM chips which have many advantages over some other ROM type chips, most notably – they cost less, write thousands of times faster and have a higher memory capacity per chip.

NOTE: The OctoRAM ESP sits over slot seven making that slot unusable for a plug-in card.

RAMCharger™

from Applied Engineering
$146.95 | Code H2APRC | Ship $6.00

With the RAMCharger battery backup RAMFactor will retain programs and data during power failures or even when you turn your computer off. And because RAMFactor plugs into slots 1-7, it's possible to cold boot without using floppy or hard drives. Also available is a special "Y" adaptor so you can backup two RAMFactor boards. RAMCharger will also backup RAMWorks III 4 and 16 meg memory expander cards

RAMFactor (256K)™

from Applied Engineering
II+,IIe,IIGS
$189.00 | Code H2APRF | Ship $2.00

RAMFactor allows anyone owning an Apple II+, Franklin, Apple IIe, or IIGS to add from 256K to 1 meg of memory to their computer system. With an optional piggyback board, up to 16 meg can be added. RAMFactor is fully ProDOS, DOS 3.3, Pascal 1.3 and CP/M compatible and is instantly recognized by most leading software. RAMFactor will also allow you to partition memory into multiple storage areas for applications, data and even different operating systems. With battery back-up RAMCharger™ system, you can store data on RAMFactor permanently – several hours in the event of power failure. Features include:

- Fully Apple II Memory Expansion compatible.
- Enhances AppleWorks.
- Battery back-up option allows for permanent storage of programs.
- Built-in RAMDrive™ software.
- Built-in 16 bit co-processor port.
- Built-in self diagnostic software.
- Fits any I/O slot except slot 3.
- Fully socketed and user upgradable.
- 5 year warranty.

RAMWorks III (256K)™

from Applied Engineering
IIe
$163.95 | Code H2APRW | Ship $2.00

The RAMWorks III memory card plugs into the Apple IIe auxiliary slot providing 80-column text while leaving expansion slots 1 through 7 available for other peripheral cards. Expandable from 64K to 1 meg on the main board using either 64K or 256K RAMS and up to 16 meg with additional 512K, 2 meg or 16 meg expander cards. RAMWorks III can be used as an ultra high speed RAM disk with the RAMDrive™ software included with every card. Depending on the memory size of the RAMWorks III card, up to 4 disk drives can be emulated with one RAMWorks card. It can be used as a solid state disk with DOS 3.3, Pascal, CP/M and ProDOS (up to 5,700 blocks free!).
Other features include:

- Super sharp 80-column text with or without RGB option.
- Double high resolution graphics with or without RGB option.
- Can use 64K or 256K RAMS in any combination.
- Automatic expansion of AppleWorks desktop up to 3017K.
- Accelerates AppleWorks.
- Built-in AppleWorks print buffer.
- RGB option with cables for Apple and IBM type monitors.
- 16 bit option.
- Built-in self-diagnostic software.
- No slot 1 interference.
- RAMDrive software included free.
- 5 year warranty.

Static Ram Chips™

$ Call | Code H2M564 | Ship $.38

MISCELLANEOUS

AP L Case 1™
by Dan Paymar
from Enhanceware™
$35.00 | Code HLC1 | Ship $.13

Lower case adapter for Apple Motherboard revision #6 and earlier (the REV 0 through REV 6 have memory select blocks located on the left hand edge of the Motherboard-position 1, rows D,E,F). Chip is compatible with both Apple BASICs, Pascal, CP/M, and most word processing software allowing lowercase display. Document shows how to install the ApLCase 1 quickly and easily so that you will be up and using lowercase in very little time.

AP L Case 2 ™
$25.00 | Code HLC2 | Ship $.13

Same features as our original ApLCase above, but specifically for those post Rev 6 apples (Rev 7 thru Rev RFI D). Includes easy installation instructions and program patches.

Disk Doubler™
$15.00 | Code HRIGNO | Ship $.13

A handy tool that will double your disk storage capabilities. One bite from the "Disk Doubler," and a clean square notch is positioned in just the right place allowing you to use the reverse side of the disk for storage needs.

Paddle-ADAPPLE "Combo" Pack ™
from Southern California Research Group
$25.00 | Code HPADLC | Ship $.50

Expand your game Paddle/Joystick/KoalaPad world with this game I/O extender. This configuration of the Paddle-AdApple offers one 16-pin connector socket and one DB-9 pin connector on one 18 inch cable enabling you to plug in two exterior devices (i.e.,KoalaPad and Joysticks) at the same time. In addition, a configuration block goes in if you want to run two joysticks at the same time. The 18 inch cable lends more mobility to you.

Snapshot Shuttle Plus™
from DarkStar Systems Ltd.
Apple II, II+ (64K), IIe
$119.95 | Code HSHUTL | Ship $2.00

Get *dramatic* productivity increases for the demanding power applications user and the sophisticated hacker! The Snapshot Interrupt card comes with all the software you need to back up many protected programs, dump the current screen to your printer at any time even when running protected programs, or take control for debugging that program which just hopelessly hung your computer.

The Shuttle is the Apple II answer to Switcher on the Mac. Now you can have four computers worth of software in your Apple at the same time. Press the interrupt button, and you resume any one of them right where you left off (unlike some imitations), no reloading files, no restarting! For example you could have two different AppleWorks sessions, a time management program and a disk copy program available at once. We even use one Shuttle partition to write documents about programs we are testing in another Shuttle partition. The Shuttle requires a minimum of a 128K II+ or IIe. Most memory boards are recognized. The Shuttle automatically uses the top end of Big Board, leaving the rest for RAMDisk. A good alternative to integrated software. Even lets you integrate your integrated software!

Note: The Snapshot card uses DMA. It cannot be used when speedup cards are active.

MODEM CARDS

APPLE-MATE 1200™
from Cermetek MicroElectronics,Inc.
Apple II, II+, IIe or IIGS . Minimum RAM. 1 expansion slot. 40 or 80 column monochrome or color monitor
$169.00 | Code HAPLMT | Ship $3.00

The Cermetek Apple-Mate 1200 Modem card can be used in any slot in your Apple IIe or II+ (excluding the Auxiliary slot in the IIe) and requires no external interfaces or power supply. It is both Bell 212A and 103 compatible, as well as Hayes SmartModem compatible and will communicate at 110, 300 or 1200 bps. The onboard terminal emulation software allows your computer to act as a communication terminal without additional software. By entering commands from your keyboard, you can auto-dial data bases, bulletin boards, make calls to other computers, auto-answer calls and much more. And, because of the resident Hayes compatible "AT" command set, it is compatible with a wide variety of communication software. For the same price you'd pay for other 1200 bps modems, you gain many additional sophisticated features that make communications easy. The Applemate 1200 Modem automatically selects Touch-Tone or rotary pulse dialing before it begins its auto-dial sequence. The speaker volume is adjustable for those late night sessions and monitors the progress of the call with messages it sends to the screen.

Features include:
- Built in ROM based terminal emulation software.
- Hayes "AT" Command compatible.
- 1200/300/110 bps full or half duplex operation.
- Uses only one slot.
- Auto-dial, Auto-answer.
- Built-in speaker.

Advanced Features
- Touch-Tone or rotary pulse dialing auto-selected or command specified.
- Electronic Call Progress Tone detection (dial, ring-back, busy, voice, and connect).
- Built-in diagnostics.

Great companionto Modem.Magician! While supply lasts Modem Magician will be included with this modem!

PARALLEL CARDS

Videx Unprint Parallel Printer Interface™
Apple II, II+, IIe

$63.95 | Code HVIDIN | Ship $1.38

A single graphics printer interface compatible with over 25 printers! Works with Apple DOS, ProDOS, Pascal, Logo, and CP/M in Text mode. Special commands are available to control page width, length, and left margin. In graphics mode HIRES graphs and pictures (Double HIRES on the IIe) are easily printed (even in color on the IDS Prism printer). Parallel cable and extensive documentation included.

SERIAL CARDS & MULTIFUNCTION CARDS

The AlphaBits II™ Serial Printer/Modem Interface

from Street Electronics
Apple II,II+,IIe
$90.00 | Code HABITS | Ship $2.00

The AlphaBits II as a printer interface, has nearly twice the features found on the Serial Grappler™ or Grappler+™ which Street Electronics designed in 1982. The AlphaBits II has over 60 easy-to-use graphics and text printing commands built into the exclusive 8K of firmware with the option of adding either 16K or 64K of print buffering. With the optional 64K of print buffer, The AlphaBits II is capable of holding a full 20 pages of text! This eliminates the need to wait for the printer to do it's job before you can continue to use the computer to do yours.

The AlphaBits II firmware features HIRES graphic screen-printing commands such as windowing, zoom (magnification), double HIRES screen dump, rotate, inverse and more. It will print graphics to the ImageWriter™, ImageWriter II™ color printer, Scribe™, Epson, Okidata, and other popular serial printers without software. Text formatting commands include margins, line and page length, page titles, and page numbers.

The AlphaBits II can also be used as a modem interface compatible with 300 or 1200 baud modems. This modem interface has commands identical to the Super Serial Card with switch selectable baud rates. AlphaBits II is the single function equivalent of The BusinessCard™, sharing many of the same features including plain English commands, and for the IIe, pull-down menus.

AlphaBits Cables™

For Modems:
$17.50 | Code HMOD2C | Ship $.50

For ImageWriter Printers:
$20.00 | Code HPTRC | Ship $.38

The AlphaBits come with 5 pin female Din connectors for mounting at the back of your computer. You may use any Apple IIc compatible cable or order the following:

The LiveWire Serial/Parallel Converter™

from Street Electronics
Apple IIc
$69.00 | Code HLIVE | Ship $1.00

Now, connecting your IIc to a parallel printer is as easy as plugging in The LiveWire from Street Electronics. The connector contains the Serial to Parallel conversion circuitry and plugs directly into the serial port of the IIc. No additional hardware or software is required.

An easy to use HIRES graphics and text printing program is also included making The LiveWire the easiest and most inexpensive way available to connect a parallel printer to the Apple IIc.

Slotbuster II™

from RC Systems, Inc.
Apple II+,IIe, IIGS

Slotbuster II
$120.00 | Code H2R9SB | Ship $1.38
Speech Synthesizer Option
$38.00 | Code H2R9SS | Ship $.38
Clock Option
$39.00 | Code H2R9CP | Ship $.38
Parallel Printer Port Option
$17.00 | Code H2R9PP | Ship $.25
Serial Printer Port Option
$13.00 | Code H2R9SP | Ship $.25
Modem Port Option
$24.00 | Code H2R9MP | Ship $.25
BSR Port Option
$29.00 | Code H2R9BP | Ship $.25
Slotbuster II 32K Buffer
$29.00 | Code H2R9B3 | Ship $.25
Slotbuster II 64K Buffer
$57.00 | Code H2R9B6 | Ship $.25
Slotbuster II Shielded Serial Cable 9'
$17.00 | Code H2R9SC | Ship $.25
Slotbuster II Shielded Parallel Cable 9'
$21.00 | Code H2R9PC | Ship $.25
Slotbuster II Synthesizer Extender Cable
$4.50 | Code H2R9EC | Ship $.25

The designer has been told that it couldn't be done! Our own testing shows that the skeptics are wrong.

Here is a multifunction card that lets you have a parallel printer, serial printer, modem port, speech synthesis, clock, and BSR control at the same time while using only one slot. This approach to multiple functions is fully compatible with the IIGS and lets you use the "phantom" slots that are lost by most multifunction cards such as the Versacard and the Business Card. With the Slotbuster II, a standard "CONTROL-I" printer command is used to change the output device at any time.

The Slotbuster II is designed to be expandable. (In its base configuration, it can't do anything!) Just choose one or more of the options, and you only have to pay for what you need. Additional options can be installed by you at any time if you decide to treat yourself later on. Check your installation with the diagnostic software supplied. Any suspect chip is highlighted on a graphic image of the card. Very low power design.

- Preferences Remembered: Configuration of the card is simple with a Mac-style pulldown menu system (text on II+'s). Choose printer types, data rates, time display format, speech volume, pitch and rate, and more; it is saved on the special EEROM until you want to change it again. Avoids the "DIP Switch Horrors"!
- Buffered Output: Comes with 8K buffering, expandable to 64K. Both printer ports, speech, and BSR functions are buffered simultaneously by the onboard processor, thus freeing the Apple proces-

sor to get on about its business. Flush the buffer at any time by pressing both Apple keys (II+ paddle buttons).

- Speech Synthesizer Option: All the text-to-speech software is on the card so you don't have to worry about memory conflicts. If your program can output to a printer, it can output to the speech synthesizer without any modifications. You can even teach it to pronounce a specialized vocabulary correctly by uploading these exceptions for use by the text-to-speech software. Even send phonemes directly, as well as control pitch and inflection. Great for special effects and learning more about the science of speech. The synthesizer connects directly to the Apple speaker without disabling regular speaker functions. Get the optional Synthesizer Extender Cable with mini phone jack for connection to a higher quality external speaker.
- The Synthesizer Option: Comes with SpeechWorks software which causes AppleWorks to echo characters, words, punctuation (or any combination) as you key in the information. You also have the option of "printing" the entire document to the synthesizer. SpeechWorks is handy for confirming numeric data entry. Additional support for the blind includes optional SCAT software for using Echo Card compatible software.
- Clock Option: The clock option comes with software which installs simply in ProDOS for time and date stamping your files. Also included is a program which patches AppleWorks to continuously display the time on the screen.
- Printer Port Firmware: Both printer ports are compatible with most popular printers and software for text output and the reproduction of the screen in color or Black and white. In addition, both printer ports have firmware for HIRES and double HIRES monochrome graphics dumps (subset of Grappler command set). The most important commands of the Super Serial Card are also recognized. (At the actual hardware level, the Apple Parallel card registers are used for both parallel and serial printers.) The parallel port support the usual ready-busy handshaking; the serial port supports DTR handshaking, but not the less common XON-XOFF protocol.
- Parallel Printer Port Option: Includes DB-25 back panel termination, Apple Parallel Card compatible. Also requires the parallel printer cable for connection to your printer.
- Serial Printer Port Option: Includes DB-25 back panel termination. Order cable below or use any Super Serial Card compatible printer cable.
- ModemPort Option: The modem port is Super Serial Card compatible at the hardware level, and works with most communications software, such as Point-to-Point and Modem Magician. The modem port option may not work with some terminal software which make use of serial port firmware. The modem port lacks its own firmware. Interrupts, DTR handshake, and XON-XOFF protocol work with this card. Allows the Apple IIGS to continue to use some older communications software. Uses the Serial cable below, or most modem cables for use on the Super Serial Card.
- BSR PortOptionN: The BSR port comes with the ultrasonic transducer for use with X-10 Command Consoles. (A.P.P.L.E. favors the X-10 Powerhouse instead of Slotbuster for this job.)

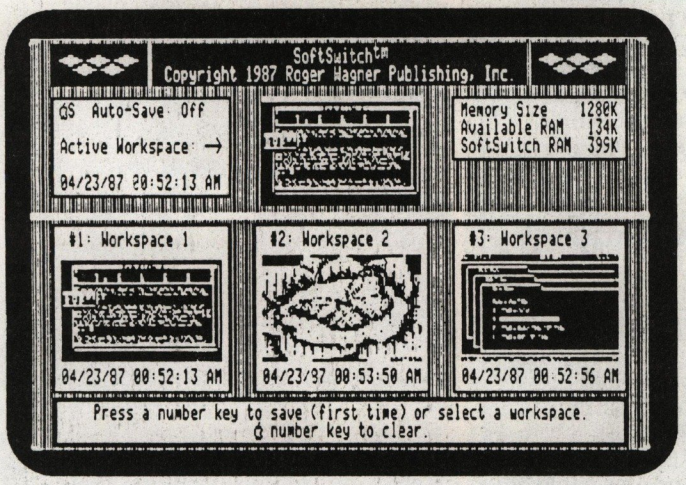
NEW

IIGS OWNERS

You have seen Switcher on the MAC

NOW You can Switch too!

You can switch instantly between up to 3 completely different applications on your Apple IIGS!



SoftSwitch™!

From Roger Wagner Publishing

- Switch between ProDOS 8 and DOS 3.3 programs.
- Combine Program Features between different programs.
- Revert to earlier states of a program.
- Save programs in mid-operation and resume any time later, exactly where you left off.
- Copy & Paste graphics screens between programs.

Program switching takes just seconds, and the SoftSwitch display shows a graphic representation of all currently loaded programs.

If the programs you use on the Apple IIGS allow access to the Control Panel while they're running, then they're compatible with SoftSwitch.

SoftSwitch requires an Apple IIGS with at least 512K extra RAM (expansion card) and a 3.5" disk.

Code: S2RWSS
ONLY $37.95
Ship $1.00

NEW

NOW you can get

Customize your Text — Make your own Fonts!
Create highly detailed graphics!

DOUBLE-HIGH

Resolution Generator and Editor.

From Synergistic Software — THE MAKERS OF HIGHER TEXT

Add detailed DOUBLE-HIGH res graphics, fonts, and color to your programs quickly and easily—even in BASIC. DOUBLE-HIGH was developed by the programmers that program for publishers like Broderbund, Activision, Epyx, Walt Disney, World Book, Sierra On-Line, and many more.

Easy enough for beginners in BASIC and advanced enough to help experienced machine language programmers. Benefit from these DOUBLE-HIGH features:

- Control DOUBLE-HIGH graphics from BASIC (first time available)
- Bit map editor and display routines can add sharp colorful graphics to your program
- Print proportional text in 40 or 80 columns using large or small, colored, bold, underlined or italic text anywhere and on the screen.
- **Create YOUR OWN NEW Fonts,** modify others (10 included), use HIGHER TEXT Fonts.
- Use 16 colors—rather than 6
- Control text like a Macintosh, for text or background, have colored windows.
- Edit and modify displays from Dazzle Draw and other graphic programs

Machine language, works with DOS 3.3 and ProDOS, 128K, IIe, IIc, IIGS.

Additional Font Disk available, 20 new Fonts $19.95

BONUS: Get Shareware Programmer's Fingertips for only $10.00 more when purchased with DOUBLE-HIGH

Code: S2EHDH
$39.95
Ship $.60

NEW

NOW GET THE FULL VALUE OUT OF YOUR PRINTER!

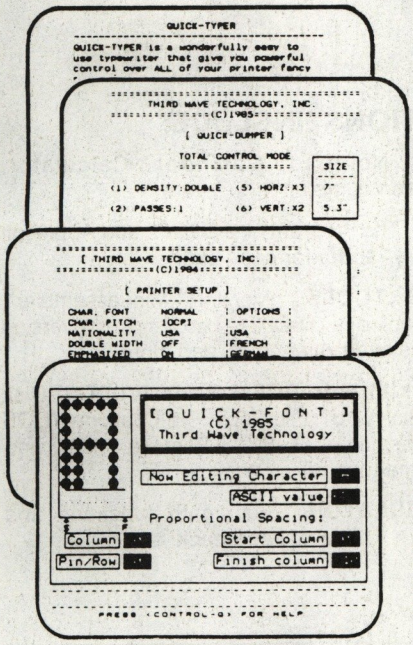
IIGS COMPATIBLE!
and II+, IIe, IIc

PRINT-QUICK™

Don't Settle For Less

PRINT-QUICK Puts the 5 most needed printer support programs on one disk. Why purchase separate products at over $200 when PRINT-QUICK does it ALL and BETTER for less!

TOLL FREE Technical Support! *We love this product and use it in the office. It has excellent screen prompts, error diagnostics, help screens, and a superb document.* ***Rated excellent by all reviewers!***



1. **QUICK-SETUP** Master your printer with the ability to control ALL print features right at your fingertips.
2. **QUICK-TYPER** Turns your printer into a modern electric typewriter with control over all print features. Text may be sent right to the printer or to a text file.
3. **QUICK-DUMPER** Provides one button Hi-Res screen printing, or Total Control selects your own print style. Includes Hi-Res screen of over 30 handy sign phrases.
4. **QUICK-FONT** Changes the shape and style of your printer's characters as easily as you'd change the printwheel in a typewriter. Four new character sets included on the disk. Use the Special Graphics characters to create custom business forms.
5. **TEXT FILE UTILITIES** Print text files or display them on the screen with all hidden command characters revealed!

DETAILED HELP SCREENS and a QUICK REFERENCE CARD allow immediate use of PRINT-QUICK supported by a comprehensive Owner's Manual.

PRINT-QUICK can be used with most word processors (including Appleworks), data bases, spreadsheets, virtually any program that uses a printer, or by itself.

PRINT-QUICK runs on the entire Apple II family. PRINT-QUICK unleashes the full power of the Apple Imagewriter I & II and other printers made by Citizens, C. Itoh, Epson, Okidata, NEC, Star Micronics and their Compatibles. Requires 64K and ProDOS.

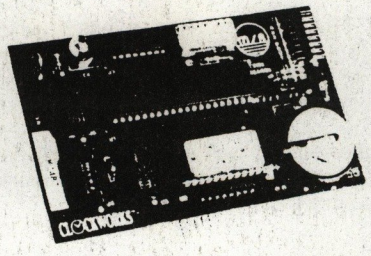
All 5 Programs
For A SUPER VALUE
COMPARE AT $200

RETAIL $49.95
Code: S2EHPQ
ONLY $44.95
Ship $1.00

CLOCKWORKS®

The most powerful full feature real time clock EVER designed for the Apple!

A new and innovative ground-up design with new technology that gives you all the features you'd expect from a high quality product, all the compatibility you must have and above all, additional capabilities not available with any other clock.

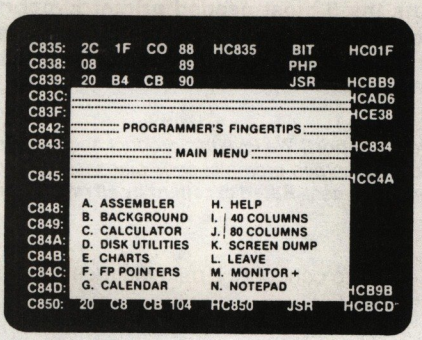


FEATURES:

- Adds the time and date to Appleworks screens and files.
- Set the time precisely to any exact second.
- Long life lithium battery, always works, no recharging is ever needed.
- Includes a digital I/O port for advanced applications.
- External source interrupting and flagging.
- Built-in time setting commands.

ClockWorks has 24 hour and AM/PM modes, software selectable interrupts, time and date stamps, ProDOS, DOS 3.3, and Pascal files, and comes complete with four disk sides full of useful software, including "The Time Machine", a new powerful disk based equipment book/time management system written especially for ClockWorks. For II, II+, IIe

OUR PRICE $89.95



If you are programming on the Apple II you should have this package!

From Synergistic Software

PROGRAMMER'S FINGERTIPS

A new collection of handy utilities, charts and tools, designed for the programmer and constantly ready for your use. All functions work with both ProDOS and DOS 3.3 disks. You can instantly switch operating systems at any time or transfer data between them.

FAST Memory resident, but out of the way in AUX RAM.

EASY TO USE Consistent commands throughout. Windowed menus, prompts, and extensive help files.

CONVENIENT All functions always there. Enter and exit without disturbing your own work areas or data.

POWERFUL Many useful utilities all in this one package.

COMPATIBLE Works on all Apple II systems and with most utility programs like Merlin, GPLE, and others.

FEATURES INCLUDE:

MONITOR We have added a number of handy features to the Apple's current monitor. Now you can display in both HEX and ASCII at the same time (128 bytes) or display just ASCII (512 bytes). Step up or down in memory using the arrow keys. The disassembler now works with all 65C02 opcodes on all Apples. Many other improved features included.

DISK EDITOR Read in any block or sector from your DOS 3.3 or ProDOS disks. Edit it using all the power of your Monitor+, then save it back to disk. Disk search also included.

SCREEN DUMP Dump to your printer your 40 column screens, 80 column screens, any Programmer's Fingertips windows, or even your high-res screens.

FILE TRANSFER Regardless of which operating system you are using at the moment, Programmer's Fingertips allows you to transfer any files from one disk to another, or from disk to memory.

Operates equally well with floppy disks, hard disks, RAM disks, and the UniDisk. Replace a dozen separate utilities with one convenient, easy to use package.

RETAIL $49.95

Code: S2EHPF

ONLY $39.95

Ship $1.00

HELPFUL FUNCTIONS INCLUDE:

GENERAL TOOLS Notepad, Calendar, Calculator, 40/80/high-res screen dump.

APPLESOFT TOOLS The Program Line Editor*, and Applesoft pointer display utility* and error code charts.

MACHINE LANGUAGE TOOLS Monitor*, Mini-assembler*, Opcode charts (includes 65C02), Hex/Ascii conversion charts, branch code interpreter chart, and more.

DISK TOOLS (all work in both DOS 3.3 and ProDOS) Disk Map, Disk Editor, Disk Copy, File Copy, File Converter (DOS to ProDOS), File Displayer, DOS 3.3 Remover utility, and DOS/ProDOS command mode.

HEXADECIMAL CALCULATOR Full math functions and conversion from HEX to decimal and back.

*Requires 128K

ProDOS UTILITIES

A. Switch DOS — ProDOS
B. Disk Editor
C. Disk Map
D. Disk Copy
E. DOS Remover
F. File Displayer
G. File Transfer
H. Other DOS Commands

DOS 3.3 UTILITIES

A. Switch ProDOS — DOS
B. Disk Editor
C. Disk Map
D. Disk Copy
E. Set Prefix
F. File Displayer
G. File Transfer
H. Other ProDOS Commands

PROGRAM LINE EDITOR

- Insert or delete characters
- Jump to (or delete to) the next occurrence of any character
- Jump cursor to the beginning or end of the line
- Pack the line by removing all unnecessary spaces
- Insert (and display on screen) control characters
- Restore the original line at any time with one keypress
- Many more features

Change lines of BASIC without retyping the whole line or tracing over it. Faster, easier, and so intuitive that you'll wonder how you ever edited programs without it. The editor is accessible at any time, but is out of the way in AUX RAM where it won't take up any of the space needed by your BASIC programs and data.

Not copy protected.

"An exceptional value, it offers a lot of performance and outstanding support for very few dollars."
—inCider

From Synergistic Software

A TOP SELLER

FINGERTIPS

DESKTOP ACCESSORIES

See reviews in A+, inCider, Nibble and other publications.

Pop us these useful Time Savers from within many **ProDOS** and **DOS** programs, including AppleWorks, or all by themselves.

Calendar	Scheduler	Directory
Notepad	Cardfiler	Telecom Window
Business Calculator	Scientific Calculator	HEX Calculator

Running **FINGERTIPS** in the background while you are using your spreadsheet, word processor or other programs, you can look up information, make appointments, do calculations or transmit data files to another office.

You can open the **FINGERTIPS** windows anytime with a single keystroke and have all of its powerful tools literally at your fingertips. **FINGERTIPS Desktop Accessories** come up, do your job, then disappear without a trace, leaving your program running, with all your work intact. DOS 3.3, ProDOS and IIGS compatible.

FINGERTIPS FEATURES:

FULL FUNCTION CALCULATOR With tape printed on screen or on your printer! You can see your chain equations, make changes, recalculate and then print out your tape if needed. **FINGERTIPS** performs the popular four functions plus percentages, transcendentals (log, sin, tan, etc.), exponentiation, square roots and hex arithmetic.

MONTHLY CALENDAR AND APPOINTMENT PLANNER Schedule things to do, or jump to any date desired instantly. Enter up to 15 lines of appointments, meetings, or events per day.

NOTEPAD You will never wonder where you put your notes again. A great advantage when needing to take notes while working with other programs.

CARDFILER AND PHONE DIRECTORY Saves names, addresses, and phone numbers that can instantly be retrieved. You can have multiple files, print a single record or all records as cards or labels, or print the entire file as a list.

TELECOM The helpful telephone dialer and telecommunications program saves a lot of time and makes using your modem faster and easier. Telecom can automatically dial your phone calls from your card file. Telecom will log you on, receive and transfer files, converse, and allow voice communication. This feature works only with **Hayes Smartmodem** and compatibles.

INSTANT DOS/ProDOS Allows you to use any DOS or ProDOS command without leaving your program.

ALL FEATURES PRINTABLE! Screen dump included for printing all other user screens. **DOS** and **ProDOS** on one disk. Shareware is ProDOS only. Works with most RAM cards, hard drives, and printers.

Works with hundreds of programs including AppleWorks 1.3 and 2.0 (2.0 Floppy Only). Does not work with Dollars and Sense, the PFS or BPI Series, Sider Hard drives, and Checkmate RAM software. Background on DOS 3.3 requires 128K.

COMPARE

	FINGERTIPS	PINPOINT
Price	$39.95	$89.95
COMPATIBILITY		
AppleWorks	Yes	Yes
Fully functional with other ProDOS programs	Yes	No
DOS 3.3 programs	Yes	No
Apple IIc/Enhanced IIe	Yes	Yes
Non-enhanced IIe	Yes	No
II or II+	Yes	No
Fully functional stand-alone	Yes	No
80-column display	Yes	Yes
40-column display	Yes	No
High-res display	Yes	No
Features:		
CALCULATOR		
4 function calculator	Yes	Yes
Scientific functions (Sin, Log, etc.)	Yes	No
Hex calculator	Yes	No
TELECOMMUNICATIONS		
Autodial from directory	Yes	No
Terminal mode	Yes	Yes
Send/receive files	Yes	Yes
DATABASE		
Mailing list filer	Yes	No
Print labels or lists	Yes	No
Database/telecom link	Yes	No
CALENDAR/PLANNER		
Display any month	Yes	Yes
Instantly jump to any other month/day	Yes	No
Scan by year or month	Yes	No
PRINTING		
All functions printable	Yes	No
Print user's 40/80 column screen	Yes	No
Screen dump	Yes	No

Code: S2RWSS

OUR PRICE

$39.95

includes Document, Support & 1-year Updates

Ship $1.00

DATABASE

Guide™
from Owl International
Not copy protected.
$79.00 | Code SMO2GD | Ship $2.00

Guide is the first hypertext system designed specifically for the Macintosh. It provides virtually limitless flexibility in storing, retrieving and assembling electronic information. Unlike outline processors that force you to structure information according to a rigid format, Guide allows you to flow naturally through text and graphics.

Rather than emulating a printed page, Guide is designed to take advantage of the computer screen by allowing any number of windows containing graphics and text to be displayed. Use Guide to create any type of electronic document for desktop publishing, electronic mail, creative writing, researching, etc. Guide supports MacWrite, MacPaint and MacDraw. You can print anything that can be configured on your screen.

Guide is a program that you can learn while you use it. Four cursor patterns and six screen devices are all you need to know. It is 100% Mac honest.

ENTERTAINMENT

Also see Electronic Arts

Bureaucracy™
from Infocom
$25.95 | Code SMM1BC | Ship $1.00

All you want to do is go to Paris... but just try to cash your latest paycheck.

Another great interactive adventure from the makers of Zork, and by the author of HitchHiker's Guide to the Galaxy, Douglas Adams.

Dark Castle™
from Silicon Beach Software
$30.00 | Code SMS1DC | Ship $.25

Dark Castle is a fast-paced, arcade-style action game in which you control the movements and actions of the hero as he battles his way through the Castle. It features Silicon Beach's renowned Real-Sound™, which you have to hear to believe! The stunning graphics and smooth animation will take your breath away. There's so much to this game, it takes two disks to hold it all.

King of Chicago™
from MindScape Software
$32.95 | Code SMM4KC | Ship $1.00

From the creators of Deja Vu, and Uninvited, comes a new series of programs which takes computer adventuring to the limit. King of Chicago is the second Interactive Movie in this beautiful line of games, coming right after the incredibly successful Defender of the Crown. King of Chicago pits you against Al Copone in an attempt to overthrow that underworld leader and become the city's new crime boss.

Leather Goddess of Phobos™
from Infocom
$25.00 | Code SMI2LG | Ship $1.00

Why limit your game playing to the mundane, boring old arcade clones, when you could be galavanting across space, blasting ugly aliens and committing all sorts of indiscretions? Infocom's new text adventure allows three levels of conversational interaction: Lewd, Suggestive, and for the conservative, a Tame mode. Whatever their politics, everyone will enjoy a good laugh on this bawdy rip-off of the old teen-teaser B-movies. So grab your scratch-and-sniff pad and put on your 3D goggles (included) and let loose your wildest fantasies.

Shadowgate™
from Mindscape, Inc.
$32.00 | Code SMM4SG | Ship $2.00

The creators of Deja Vu™ and Uninvited™ now introduce their third adventure to use the powerful command interface pioneered in their earlier games.

As the last of the "Line of Kings", only you possess the power to destroy the cunningly evil Warlock Lord. but first you must find him before his horde of nasty allies finds you. A huge castle overflowing with secret passageways, collapsing floor, and armed creatures with good aim awaits your inspection. Good luck. Like Deja Vu™ and Uninvited™ this one's a killer.

Sub-Battle Simulation™
from Epyx
$25.95 | Code SME3SB | Ship $1.00

Lurking in the murky deep, a silent ship trails the thrum of an enemy convoy. The grim commander sights in on a laden vessel and cries for torpedo launch. Tube one, tube two, and three and four, all issue their destructive missiles.

A 'ping' echoes off their hull, then another and another. The swish of rotors passes above. Some small splash is barely heard. Then the sea is ruptured by cacophony.

Two vessels fall to the floor by morning.

FILE UTILITIES

Copy II Mac™
from Central Point Software
$21.95 | Code SMCCPY | Ship $.88

Note: Central Point Software is constatly updating and improving Copy II Mac. As a result, we will no longer lst the version number in the catalog. We will however, continue to stock the very latest revisions of Copy II Mac as they are released.

Every bit as good as the Apple II version, Copy II Mac offers a very strong Bit Copy program for backing up protected software, plus a Sector Copy with and without format. Copy II Hard Disk does just that and Mac Tools is a useful set of disk utilities to recover damaged files and repair damaged disks.

- Sector Copy.
- Copy protect/Unprotect.
- Make files visible/invisible.
- Undelete files.
- Sector/file editor.
- Copy files/disk.
- Format/verify disks.

Disk Express™
from ALSoft
Not Copy Protected.
$28.95 | Code SMAADE | Ship $.50

Have you ever wondered why your hard disk seems to get slower and slower as you use it? This is a result of disk fragmentation when data blocks for individual files become spread out over the media surface. Accessing fragmented files is very slow compared to linear sectored files because the drive read head has to scan all over the disk for reads and writes.

Disk Express' primary purpose is to clean up fragmented files and put maximum performance back into your disk. It supports floppy disks as well as hard disks, for either MFS or HFS formats. Requires 512K Mac (or bigger) to operate. Other features:

- Finds media and directory errors.
- Recovers missing blocks.
- Compacts the desktop file.
- Option to completely erase deleted files.

MacLabeler®
from IdeaForms, Inc.
$29.95 | Code SMI4ML | Ship $.31

Create neatly organized, customized (HFS compatible) labels for your 3 1/2" diskettes.

MacUp™
from Carl Nelson & Associates, Inc.
$19.95 | Code SMIHMP | Ship $.50

MacUp is not just another back-up program. We all know the importance of backing up our hard disk drive, but the incompatibilities between different manufacturers equipment and their software is one of the major reasons MacUp was written. In addition to working with any HFS device, MacUp can back up your hard drive with its unique time and date feature. Now you can set your Mac on auto pilot and not have to play nursemaid to your tape back-up device. Most standard back-up programs run in two modes; back-up all, or back-up changes. With MacUp you set the boundries of what you need. If you want to back up only those files that start or end in a name or letter, you select it "how you want it". Most of us place files inside folders, MacUp allows you to display by filename (using visual branch method) what files are inside nested folders. And if you have a network system, MacUp supports networks. Now any Mac on the system can be used to back-up the host whenever you tell it to and it will do it all automatically! Normally $39.95, introductory price $19.9, through Oct.31, 1987.

Major features include:

- Special time delayed AUTO Back-up
- Full volume or incremental data back-up capabilities with source and destination volumes selected by the user
- Full user discretion on back-up session configuration where user may select and edit individual files/folders to be backed up and save selection criteria for future use
- Unique separate folder and file view windows that are configurable, cross scroll with each other and can be printed to show the entire directory- and hierarchical strucure of any volume
- Much, Much,More

Smart Scrap & The Clipper™
from Solutions International
$39.95 | Code SMSVSC | Ship 4.50

Tired of being tied to the single Scrapbook that comes with the Macintosh system folder? Tired of its fixed viewing size? Then Smart Scrap & The Clipper are the solutions for you! Smart Scrap replaces the standard Mac scrapbook and lets you create multiple scrapbooks, name them and choose the one you need from a list. Once you have selected the scrapbook you want, you can easily view even clippings larger than a full screen using the scrollable window. Select all or a portion of th picture and cut only that part you want to use. The Clipper then lets you trim or sale the contents of the clipboard before sending it to its final destination. A must for those who frequently rely on the Scrapbook.

- Create multiple scrapbook files.
- Open any scrapbook on any disk.
- Select any rectangle of a scrapbook for copying.
- Find any picture easily in any scrapbook with uniqued pictorial table of contents.
- View the entire scrapbook picture with vertical and horizontal scrolling.
- Trim and scale picture to exact dimension you need before pasting.
- See contents of clipboard even from applications that don't support "Show Clipboard."

GRAPHICS

ComicWorks™
from Mindscape
$49.00 | Code SMM4CW | Ship $3.00

Don't let the name fool you. ComicWorks is one of the most powerful graphics programs available to date for the Macintosh. It combines all of the power of MacPaint, MacDraw and FullPaint and then adds several new commands, a number of new tools, plus the ability to mix bit mapped graphics with object oriented graphics all in one! Not copy protected. Features include:

- Full featured paint program
- Mix text and graphics anywhere on page.
- Full text-editing capabilities.
- Multi-page documents.
- Independent graphic objects with assignable priorities.
- Professional quality air-brush with variable pressure settings.
- Full LaserWriter font and printer driver support.

- Comprehensive manual with step by step tutorials.

Design™

from Meta Software

$225.00 | Code SMMTDS | Ship $1.13

Design is a powerful graphics and text handling program to help you visualize complex systems. Design speeds the creation of flow charts, information networks, computer programs, organizational charts, production line diagrams, decision trees, and presentation graphics - anything for which graphic representation best illustrates the concepts and relationships between elements.

Design is superior to other object-oriented drawing programs because of the extended fuctionality of its structured graphics and relationships. Once you connect one object to another, it stays connected, no matter where you move it. You can build Design diagrams up to 999 pages and arrange them in hierarchical structure. You can move detail to a sub-page so that the big picture is easier to see. With Design, you can edit, manipulate, and stylize text inside any graphic object., even create hypertext links to organize text across multiple pages. Features include:

- Full range of graphic editing features, including complete allignment and formatting facillities
- Extensive text-handling capabilities
- Connected oblects stay connected when moved
- Mutipage diagrams can be hierarchically linked, and you can build diagrams up to 999 pages
- Text and graphics can be imported into Design and Design diagrams can be exported in PICT format to other applications.
- An unlimitied number of objects and combinations of objects can be created with the custom pallette feature.

FullPaint™

from Ann Arbor Softworks, Inc.

$63.95 | Code SMA8FP | Ship $5.00

FullPaint™ is here and filled with all of the goodies that you'll ever need or ever imagined. Taking over where the classic MacPaint™ left off, FullPaint is probably the only painting program you'll ever need for your Macintosh. Compatible with the 512K Mac and Mac Plus it even comes ready to install itself on your hard drives, allowing you to install up to five copies on or in any MFS or HFS volume. FullPaint and MacPaint files are completely compatible and totally interchangeable! If your ready for the thrill of a life time, load one of the pictures you so painstakingly created with MacPaint into FullPaint and see how easy it could have been! FullPaint allows you to have up to four - YES four windows open at any one time. Four movable windows complete with vertical and horizontal scroll bars and size boxes. No more need for "SHOW PAGE" and moving your painting around under that under-sized, stationary window with that little hand icon. And for a bigger thrill, just look at this list of other FullPaint features:

- On-line help available at any time.
- Full-screen painting with movable-removable tool and pattern palettes.
- User changeable brush shapes.
- Mousecrawl™ allows you to move in single pixel increments.
- Mousepot™ displays the exact size of the object being drawn as well as the precise position of the cursor.
- Rulers/ruler units allows for exact positioning of objects.
- Rotate does just that in 90 degree increments.
- Free rotate allows you to Rotate any selected object in1 degree increments!
- Invert reverse pixel colors form black to white or white to black.
- Distort lets you arbitrarily change the shape of an object.
- Enlarge/reduce lets you change the size of an object.

And the list goes on! You can change the perspective of your drawing or object to simulate 3-D drawings, Flip both horizontally or vertically your image or selected portion thereof. A program LazerPrint™ is also included which allows you to split your picture up into sections and manipulate the image at up to 300 dots per inch resolution! If you've used MacPaint and enjoyed it, then we're sure that you'll flip over FullPaint.

Glue™

from Solutions, Inc.

$39.95 | Code SMS4GL | Ship $.75

Glue is an easy, accurate way to copy graphics produced by one Mac application into another Macintosh application. Glue's ImageSaver provides a "print to disk" capability for most Mac applications. Documents printed to disk are application independent. Once the "printed" output from the Mac application has been captured on disk, it can be displayed, printed or copied by Glue users via the Viewer regardless of whether they have the creating application. Graphics copied may be up to a full page in size regardless of screen size. All drawing commands are saved for accurate LaserWriter printing and scaling. Glue includes text in varying fonts, sizes and styles. Glue also removes headaches from the electronic transmission of graphics information since the recipient doesn't need a copy of the creating application to display, print or copy transmitted information. The transmitted graphics can then be pasted into the recipient's work as needed with the Viewer

MacModel™

$38.00 | Code SMCMOL | Ship $1.00

MacModel is intended for anyone who draws three-dimensional objects for work or fun. If you're a student, educator, interior designer, mechanical engineer, architect, artist, or hobbyist, here's what MacModel can help you do:

- Build models of three-dimensional objects, from molecules to skyscrapers. You can even build scale models.
- Create, move, stretch, and

rotate objects with simple mouse motions.
- Combine, reshape, and arrange objects with easy to-use tools.
- View your models from as many vantage points as you wish, in wide angle or tele-photo perspective.

MacModel is available for the 512K Macintosh and the Macintosh Plus

Print Shop Mac™
from Broderbund Software
$49.95 | Code SMB2PS | Ship $1.50

Being creative with clip art is fun, but it can be hard to use. Now with The PrintShop, you will have an automatic design studio you can use to design, layout and print professional-looking greeting cards, stationery, flyers, banners and more, almost instantly! And with color too!

Need an instant "Do Not Disturb" sign? Birthday or Anniversary card? All it takes is a press... of your mouse, that is. Choose from a variety of ready-made designs, or create your own custom designs. Select from a wide range of typesty-les, background patterns, graphic symbols for all occasions and beautifully detailed border designs. You can even pick up graphics from MacPaint or from clip art programs... and use the built-in Graphic Editor to customize them any way you like.

You don't have to be an artist. You don't even have to be patient. In fact in less time than it takes to look up "printers" in the Yellow Pages, you'll be designing and printing your own personalized masterpieces.

Silicon Press™
from Silicon Beach Software
$46.95 | Code SMSVSP | Ship $.50

This printing utility lets you easily produce multiple format letters, forms, mailing labels, price labels, awards, football and theater tickets, parking permits, badges, desk placards, bin markers... just about anything you'ld care to imagine. It works with the Laser-writer and prints in color to the ImageWriter II!!

Stepping Out™
from Berkeley Design Systems
Requires 512K or better. Not copy protected.
$66.95 | Code SMB9SO | Ship $.63

The inexpensive Big Screen for your Macintosh.

Stepping Out allows your regular software to run as if you owned one of those fancy $2000 big screen displays. Your virtual screen can be as large as 10,000 pixels by 10,000 (too bad your Mac doesn't have enough memory for a screen that large). Whenever your cursor moves to the edge of the working view, your entire screen will pan across your full sized work area. Also, it can show a simultaneous reduced view of the entire screen, and it can scale your working screen so that you are working in different levels of fatbits.

Users of paste-up programs such as PageMaker or Ready-Set-Go will find this is an invaluable tool. Even heavy users of MacDraw or paint programs such as Super Paint which support full sized displays will find Stepping Out worth every penny. Programmers will see more source code, and writers can work on pages at at time rather than windows.

SuperPaint ™
from Silicon Beach Software
$59.95 | Code SMS1SP | Ship $.88

SuperPaint is not only here, but it is the best paint program we have ever seen. It goes beyond the limitations of purely bit-mapped graphics and gives you all the conveniences of object oriented graphics tools same as Mac Draw. It supports color printing, bit manipulation at the resolution of the LaserWriter, and multiple output formats. Other features include:

- Full screen drawing area.
- Multiple windows (limited only by memory).
- Options to slant, distort or rotate selected areas of your drawing.
- Create lines, arcs, rectangles, ovals, free-form shapes which can be moved, resized, filled, etc.
- Text can be added to drawing, edited and moved.
- Save as MacPaint files, StartUpScreens, and PICT formats.

INTEGRATED SOFTWARE

Microsoft Works™
$195.00| Code SMM3WK | Ship $3.38

Although the corporate executive may find Microsoft Works limited, this powerful and fully integrated package will allow the "rest of us" to do those day-to-day business chores very quickly and easily. Included in the package are five sub-programs: a Word Processor, a Spreadsheet, a Data Base, Charting and telecommunications. WORKS is very easy to learn and use and comes with an extensive users manual as well as a 130 page Quick reference guide and tutorial. Not copy protected.

Sidekick 2.0™
from Borland International
Requires 512K Mac or better.
Not copy protected.
$64.00 | Code SMB6S2 | Ship $1.00

"Borland adds Outline Processing and Spreadsheet to Sidekick for the Macintosh!"

This isn't the old, boring, retread of Public Domain software. This version will knock your socks off! It's probably the best software value this side of Switcher.

Complete list of desk accessories in Sidekick:

- Notepad+ text editor.
- MacTERM communications (w/ XMODEM).
- MacDialer phone dialer.
- CalendarBook appointment accessory.
- QuickSheets data pad.

- Calculator+ extra function calculator.
- Outlook outline processing.
- MacPlan spreadsheet (w/ graphics).
- Area Code Lookup.
- RediPrinter TEXT file print spooler.
- MacClock analog clock.

Outlook is a full-featured outliner available as either a desk accessory or a stand-alone application. Its resume feature provides the ability to open all documents from a previous work session. Any line in an outline can contain an entire text document or picture when using Outlook. Powerful text and block editing, the ability to hide and show detail, and page layout dialog features are part of Outlook's outline processing makeup. Outlook allows the user to simultaneously open and access as many outlines as memory can handle.

MacPlan combines spreadsheet and business graphics capabilities and operates as a desk accessory on top of other applications or on its own. The program is unique in its ability to do both scrolling and folding. With folding, the spreadsheet user can display, copy or graph selected rows and columns in a spreadsheet.

Remember, these are all desk accessories so everything can be run from within your favorite application. But after buying Sidekick, you may never leave the Finder!

MACROS

Tempo™
from Affinity Microsystems, Ltd.
$59.00 | Code SMA6TM | Ship $.63

Record any series of Mac commands, mouse actions or keystrokes and Tempo will play them back on demand at a cost of two keystrokes each. Macros can stop for user input or even branch to another program. Record, save, edit and manage macros with standard Mac click and window functions.

PROGRAMMING/ LANGUAGES

II in a Mac 2.5™
from Micro-W Distributors
Not copy protected.
$117.00 | Code SMMW2M | Ship $2.00

II in a Mac is not just your run-of-the-mill Apple IIe-IIc emulation for the Macintosh. It is a complete 65C02 assembly language debugging environment which allows 'stop on address' breakpoints.

II in a Mac is a complete DOS/ ProDOS to HFS data file transfer system. Just plug your 800K Apple disks into the Mac's drive or transfer files over a serial connection. It's easy. Transfer software for both the Mac and Apple II is supplied. Copy protected programs for the Apple cannot be used on the Macintosh.

II in a Mac 2.5 can be run on any Macintosh computer with 512K or more memory. Even the new Macintosh II can run the emulation, and faster than an Apple IIe!

Use the monitor, Applesoft, AppleWorks, assemblers, games, and even education software! Mac's desk accessories are always available. Cut the screen of the Apple emulation and paste into Mac applications!

II in a Mac has great visual appeal. Watch the disk drives' lights go on. Use the joystick, it's all there on the screen! Printers, modems, 40 and 80 column text. Lo-Res, and Hi-Res graphics.

Lightspeed Pascal™
from Think Technologies, Inc.
$93.00 | Code SMT5LP | Ship $2.88

LightSpeed Pascal is a native code compiler which leaves MacPascal in the dust. It has all of the interactive features of MacPascal but goes beyond most professional programming environments. All editing, compiling, linking and launching of your applications is performed from within the same application. Every operation is optimized so only the changes made to the program will be recompiled and relinked. All 128K ROM calls are supported. Two different debuggers are included. One is an interactive source level debugger, and the other an object code level debugger. LightSpeed Pascal comes with extensive documentation (running over 300 pages) and three large example programs are supplied. Anyone considering programming the Macintosh should check out LightSpeed Pascal.

TMON™
from ICOM Simulations
Macintosh II, SE, Plus, 512ke, 512k
$119.95| Code SMI5TM | Ship $.50

TMON is a unique and powerful tool for examining in detail the inner workings of a Macintosh program. TMON is installed by double-clicking the application. That's it! TMON is then involked by any system error, TMON breakpoint, or by pressing the interupt button on the programmer's switch. TMON comes complete with a simple straight-forward User's Guide and an in-depth Technical Reference. These are designed so the novice gets results fast while the experienced developer has all the information he needs. Full function debugger inludes features as:

- Execute single steps
- Set breakpoints
- Display labels
- Move, fill, compare, search or checksum memeory
- Scamble or purge the heap
- Load, save, or exchange registers
- Unfreeze the mouse
- Intercept system errors
- Record A0000 trap history
- Discipline programs
- Debugs INITs
- Add custom features
- Compatible with most third party large screens and 68020 upgrades
- Not copy protected

ZBasic 3.01 For

The Macintosh™
from Zedcor Incorporated
$49.95| Code SMCZBS | Ship $1.00

ZBasic™ is an incredibly advanced and powerful BASIC compiler with the structure, speed, and ease of use you have always wished for, while at the same time retaining the same commands you already know. With ZBasic, you now have the power to create programs whose speed will challenge that of C and Assembly as well as other complicated languages. With ZBasic you now no longer need only be a Mac user. You can control the Macintosh by writing your own programs! Consider the advantages of ZBasic:

- Incredible speed.Compare for your self. Consider these speeds for the Sieve and Shell sorts.
  SIEVESHELL
  ZBASIC™7.0 SEC.11 SEC.
  MBASIC™ 2.1684 SEC.35SEC.
- Fast compilation – An amazing 40 lines/second!
- Structured :
  Labels OR line numbers
  Merges saved subroutines
  Automatically indents:
- Program debugging made easy:
  Highlight error; set Breakpoints
  Built-in HELP screens; direct commands; single step
- Unsurpassed user selected math accuracy up to 240 digits.
- Load old programs saved in ASCII.
- Commands for taking advantage of Mac interface and Toolbox.
- Segment Memory Management lets you control memory segments so that large applications may run on smaller systems.

PUBLIC DOMAIN SOFTWARE

Public Domain UPDATE!
from A.P.P.L.E. Co-op
$3.00 ea. | Code SMP??? | Ship $ .25

The entire Public Domain Library is now ready! Thanks to the volunteer efforts of Tom Tosch and Leon Roman, the 800K format library has been beautifully organized.

A new product code system has been implemented to handle the new library. Now there are separate product codes for each Mac PDS disk. The format for a product code is as follows:

SMP [category letter] [disk number]

Here is the current complete library.

Letter	Number	Category
U	01-09	Utilities
A	01	Desk Accessories
G	01-07	Games
F	01	Fonts
D	01-03	Demos
X	01	Text
P	01-04	Graphics
S	01-02	Sound
T	01	Telecommunication

For example: the product code for Graphics disk #04 is SMPP04.

A disk containing the catalog for the entire library is available. Its product code is SMPC00. The price is $3.00.

Look forward to periodic updates to the new library right here!

SPREADSHEET/ FINANCIAL

Also see Integrated Software

MacCalc™
from Bravo Technologies
$85.95 | Code SMB8MC | Ship $1.00

MacCalc is a full-featured spreadsheet program with a good user interface and on-line help. MacCalc offers more flexibility in page and font setup than Multiplan or Excel and has more printing options. You can transfer data from other spreadsheets to MacCalc via the SYLK file format, and with the WKS format. You can also export data to other spreadsheet programs.

MacCalc supports worksheets up to 125 columns and 999 rows. Special routines in MacCalc make operations such as entering data and recalculation, opening files, and scrolling faster than Excel. Unlike Multiplan or Excel, MacCalc offers extensive formatting flexibility, allowing you to mix font sizes and styles in each cell or range of cells.

Writing formulas in MacCalc is easier than in Excel, since the functions are immediately accessible from the menu rather than a dialog box. The list includes logical and most mathematical operators. The function menu contains 58 functions for scientific, engineering, business, and real estate calculations.

MacCalc provides an annotation feature with which you can attach comments to any cell. MacCalc lets you limit the size of the spreadsheet to the rows and columns you actually use, and the scroll bars adjust to that size. MacCalc is so flexible, you can even adjust the height of rows as well as the width of columns. You can search the sheet for both numbers and text either in the complete worksheet or in a designated range, and you can look for numbers (or text) greater or less than the specified number (or text). For the price, this is possibly the best spreadsheet for the Mac. In fact the January '87 MacUser rated it the best spreadsheet yet.

Trapeze™
from Data Tailor
Not copy protected.
$177.00 | Code SMD1TR | Ship $2.00

Trapeze is a free-form spreadsheet program that uses a block structure rather than the traditional row-and-column format. Blocks are referred to by name, instead of position, on the grid and can be moved anywhere on the worksheet. Blocks may also contain pie, polar, line, bar column, and scatter charts, or pictures and text imported via the clipboard. It can even link together up to 32 worksheets.

Trapeze lets you use all of the Macintosh fonts, styles, and sizes - even color- in any block.

Trapeze has functions for both financial and engineering applications. In addition to normal spreadsheet functions, curve-fitting, matrix operations, simultaneous equations solution and amortization table generation are included.

TELECOMMUNICATIONS

MicroPhone 1.1™
from Software Ventures Corporation
$112.00 | Code SMVEM1 | Ship $2.00

One of the most powerful communications packages available for the Mac just got better. Now version 1.1 is fully Mac SE and Mac II compatible with greatly improved VT100 terminal emulation. Microphone is easy enough to use by the novice yet it's packed with power user features. Microphone's "Script" capability lets you teach it nearly anything you want it to. Select "Watch Me" and Microphone records your every keystroke for easy sign-on/sign-off. Use the "Script" window to program Microphone. You can even assign buttons (up to 10) to your scripts which appear at the bottom of the screen for real macro power. In addition, Microphone has a text editing desk accessory that lets you edit your text even while on-line.

WORD PROCESSING

Also see Integrated Software

MORE 1.1™
from Living Videotext
Not copy protected.
$167.00 | Code SML3MR | Ship $2.00

Now there's a way to manage people and projects better using MORE. People can use MORE to outline their ideas and instantly transform them into a tree chart. You can use tree charts for organization charts, projects flow charts, decision trees, block diagrams or time lines.

For you, MORE becomes a convenient and powerful electronic notebook and card file. You collect and organize the details of daily work in an outline forming your personal status center. It can be used to :

- List and organize your tasks.
- Record names, addresses and phone numbers.
- Keep your daily calendar.
- Write and file notes and memos.
- Track your expenses.

MORE integrates idea processing with idea presentation. You can outline your ideas and quickly transform them into attractive bullet charts. Add tree charts and pictures, and you have a full-fledged slide show. MORE is ideal for writing business plans or presentations.

Thunder™
from Batteries Included
$31.95 | Code SMB7TH | Ship $1.00

Batteries Included presents a new asset for writers and programmers. Thunder is an interactive, expandable, 50,000 word spelling checker that can actually check your spelling as you type into the application of your choice. If you make a mistake, it will warn you, highlight the error and suggest possible corrections. But Thunder doesn't stop at being just a spelling checker. It has word count and readability scoring, and it can expand abbreviations dynamically. Thunder allows you to set up your own rules for expansion, but already contains abbreviations for many common words. Programmers will find it especially nice for abbreviating program structures (up to 80 characters). Imagine using it for case sensitive languages.

Word Tools™
from Aegis Development, Inc.
$48.95 | Code SMSVWT | Ship $1.19

"Perhaps the most controversial and long awaited product of this year" is finally here! Now you can use Word Tools to analyze your MacWrite, Word or Text files for style, punctuation, word counts and other data. Word Tools will also rate your document for its readability and offer comments on word usage problems.

WorksPlus™ Spell
from Lundeen and Associates.
Not copy protected
$39.95 | Code SML2WS | Ship $2.00

You bought Microsoft® Works to save time and unnecessary effort. So, let WorksPlus Spell track words for you. WorksPlus Spell is the fastest spelling checker on the market - 10 times faster- than any other. Spell checks a two-page memo in 1 second; a 50-page proposal in less than 30 seconds. Its many features include:

- Real-time spell checking.
- 73,00 main dictionary.
- User modifiable dictionary.
- Dynamic abbreviations.
- Automatic hyphenation.

WorksPlus Spell is the spelling checker to use with your Macintosh™ and Microsoft Works program. Spell is so well integrated that even the Works Help file is updated to include it. Now you can write, check, and print a document without ever leaving the Works program.

Write Now™
from T/Maker
$110.00 | Code SMT9WN | Ship $3.00

When Steve Jobs wanted a good computer, he presented the Macintosh. When he wanted a good word processor, his new company presented Write Now. This new word processor for the Macintosh is the best WYSIWYG page editing program yet. The program displays up to four columns and footnotes on the screen and lets you embed graphics within sentences or paragraphs. Write Now is written in 100% assembly language, and runs fast, Fast, FAST! It even includes a built in spelling checker with an expandable 50,000 word dictionary.

TRUE BASIC TECHNICAL LEARNING TOOLS

From the creators of BASIC , John G. Kemeny and Thomas E. Kurtz a company was formed to improve the language, and develop applications guided by their passion for education. Listed here are the Mac versions of these programs.

The following is a collection of stand alone, user friendly and interactive products for the Mac .

Algebra I

$24.00 | Code SMTBA1 | Ship $1.00

ALGEBRA I is a flexible tool for studying and reviewing topics in algebra. The package can be used as a supplement to an algebra course, or by individual students for free exploration and self-study. It is especially useful for students preparing for proficiency tests in mathematics.

Arithmetic

$25.00 | Code SMTBAR | Ship $1.00

ARITHMETIC I is a flexible tool for studying and reviewing topics in ARITHMETIC. It is not a drill or tutorial, but gives you the opportunity to provide your own examples and experiment with those examples in a variety of ways. It is especially useful for students preparing for proficiency tests in mathematics.

MacFunction

by H. Lewis and J. Tecosky
Harvard University
$25.00 | Code SMTBMF | Ship $1.00

This is a flexible tool to draw and examine three-dimensional graphs. It is especially helpful as a supplement to a course in multivariable Calculus, but also useful to anyone interested in graphing three dimensional functions.

Trigonometry

from True Basic, Inc.
$25.00 | Code SMTBTG | Ship $1.00

For learning Trigonometry or for the advanced learner of Algebra this package will help you understand trigonometry and provide answers for your problems. Plot your own functions and compare with tables of values. Overlay several functions on the same graphs or manipulate the range. Solve triangles using: SAS, ASA, SSS, and SSA methods. Work with polar coordinates and trigonometric identities. Easy to switch between radians and degrees.

Pre-Calculus

from True Basic, Inc.
$25.00 | Code SMTBPC | Ship $1.00

This package illustrates concepts to assist you in understanding those modules required to understand pre-calculus. It emphasizes how functions look, and the effect when parameters are manipulated, and helps you find the equations of a line using the two points or point slope method. Explores conic sections, polar functions, inverse functions and logarithms to any base.

Calculus

from True Basic, Inc.
$25.00 | Code SMTBCL | Ship $1.00

A powerful routine that performs symbolic differentials on any function that you enter. Displays the formula for multiple derivative and plots the functions and its derivative together on a single graph. Special topics include: limits, tangents to a curve, minima, maxima, area under a curve using approximation methods, L. L'Hopital's rules, parametric equations, Taylor series and general and specific solutions of differential equations.

Discreet Math

from True Basic, Inc.
$25.00 | Code SMTBDM | Ship $1.00

This package is a great foundation to introduce you to computer science. Construct truth tables with one or two formula, and Venn diagrams with count or probability. Simple combinatorial and recursive functions. Graph theory includes direct graphs weighted and unweighted minimal paths , Hamilton and Eular circuits and spanning trees. Build binary trees and perform binary searches . Compare and sort Algorithms under different conditions.

Probability

from True Basic, Inc.
$25.00 | Code SMTBPB | Ship $1.00

Introduction to probability theory and the decision making process. Simulate coin toss, dice toss, and random walk. It introduces normal and Poisson distribution and the central limit theorem, Bayes probability and Markov chain. Useful examples include Gambler's ruin, Galton board, the birthday problem and craps. It includes tools for Venn diagrams and simple Combinatorics.

Statistics

from True Basic, Inc.
$25.00 | Code SMTBST | Ship $1.00

This software application uses an interactive approach to introduce statistical analysis such as: Mean and Standard Deviation, Median Quartile and extreme, histogram, confidence intervals, T-T-test, residuals. Graphics options include scatterplots, lines, histogram, box plots, confidence intervals and fitted normal curves. Input data sets from key board or files, apply transforms, or generate test sets using your own functions or a variety of distribution data. A unique feature of this product is its built in editor and syntax to create, edit, and run statistical programs. Switches easily between graphics and tabular output.

DISK DRIVES

See also Generic Hardware

HD-20 20 Megabyte Hard Drive™

from MDIdeas, Inc.

$575.00 | Code HMM5HD| Ship $13.00

Add incredible speed and storage capacity to your Mac+ with the HD-20, 20 megabyte SCSI hard disk drive. The drive sits beneath the Mac to save desk space and once connected to the SCSI port will allow you to transfer data up to 6 times faster than Apple's Hard Disk 20!

- Reliable performance.
- Can be daisy-chained to other HD-20's for even. greater storage capacity.
- Very quiet.
- Easy installation.
- Floppy disk back-up utility included.
- SCSI tape back-up drive available.

SCSI Hard Drive™

from CMS Enhancements, Inc.

SC Series

SC20-20 Meg Drive

$599.00 | Code HMSV20 | Ship $11.56

SC43-40 Meg Drive

$899.00 | Code HMSV40 | Ship $11.56

SC80-80 Meg Drive

$1399.00 | Code HMSV80 | Ship $11.56

CMS has two lines of Macintosh hard disks, the SC Series and the PRO Series. CMS drives are fast, quiet,and reliable. The design of the housing and rugged mounting of the drive adds maximum protection against head crash. The heads park instantly each time the power is turned off protecting against loss of data. Included with each system are SCSI utilities (which allow users to format, initialize, install drivers, check the condition of the SCSI bus, test the drive and to search the bus for the number of SCSI devices online).

SC Series information:

- Non-operating shock rated to 40g.
- External SCSI "ID" select switch.
- 65ms average access time.
- Vented cabinet requires no fan.
- Lightweight and compact.
- Fold-away carrying handle for convienent transporting.
- Easy to use SCSI utilities.

DISPLAY

Macintosh Video Adapter™

from A.P.P.L.E. Co-op

$99.00 | Code HMPRO4 | Ship $1.00

Connect your Mac, Mac+, or Mac SE to a real size screen or projection monitors. No soldering or holes to drill. Installs by simply plugging in the video module. This one module can be used to chain up to (6) monitors or 200 feet of video cable. Compatible with internal hard drives, memory boards, and co-processors. Because this unit is a snap in, it can be removed or transferred to another Mac without leaving installation scars. Requires a high scan rate, high resolution monitor, such as the one below to match the quality of the Macintosh.

You will also need a MacTool Kit see below.

SE Video Adapter™

$99.00 | Code HMPRO6 | Ship $1.00

Note: SE adapter is designed differently than for other Mac's. When ordering you must specify if you need SE type. If nothing is specified, you will receive the standard adaptor.

Powerscreen 12" High Scan Monitor™

from A.P.P.L.E. Co-op

$295.00 | Code HMPR12 | Ship $20.00

Relieve eye strain and bring your Mac into the current standards. Adds 70% more viewing area. Platinum colored case is styled to match the new Mac+'s and SE's. Compatible with all software. Ideal for classroom instruction, User group demos, trade shows and for individuals that want to step up to a real size display.

Bundle Savings Package

Macintosh Video Adapter/Powerscreen Monitor

$340.00| Code HMPR02 | Ship $21.00

SE Video Adapter/Powerscreen Monitor

$340.00 | Code HMPR08 | Ship $21.00

MEMORY EXPANSION

Mac's-a-Million™

from Sophisticated Circuits

The Mac's-a-Million Memory expansion board allows the addition of up to 1536K (1.5 megabytes) of memory to that already in a standard Macintosh. With a 128K motherboard you can expand up to 1664K. With a 512K motherboard, you can expand up to 2048K.

The screen memory is normally remapped to the top of this extra memory to give a single, very large, contiguous area of memory which is recognized by the System, Finder, Switcher and is available to all applications.

The new 128K ROMs directly support 512K,1024K, and 2048K of memory without modification. The old Apple 64K ROMs can't handle more than 512K of memory, so the "ROM Patcher" circuit board is needed to modify the ROM code to allow it to use the extra memory effectively.

A few programs, in violation of Apples guidelines, were "hardwired" for smaller memory sizes. To allow the use of these programs, Mac's-a-Million has a mode which temporarily disables all but 512K of memory, making the expanded Mac behave like any other 512K Mac.

A quiet piezoelectric fan is available for Mac's-a-Million which keeps even a fully expanded Mac running cooler than a factory 512K Mac.

The extra memory is extremely useful as a large RAM disk (using a standard RAM disk driver, included on the master disk), virtually eliminating the need for an external floppy drive while providing faster access than a hard disk. With Switcher, up to eight applications may be loaded simultaneously, leaving enough memory free to

work effectively.

Since the installation of the Mac's-a-Million board does involve the removal of original motherboard components it voids Apple's warranty. We strongly recommend that this installation be done only by someone with experience in this type of work.

Installation available from A.P.P.L.E.. Call for pricing.

Mac's-a-Million Memory Board™

$179.00 | Code HMAM | Ship $4.00

The board comes with 0 K of memory onboard so you can use your own or purchase the amount you want from A.P.P.L.E.

Mac's-a-Million "ROM Patcher"

$29.00 | Code HMAMRP | Ship $.25

Mac's-a-Million Piezoelectric Fan

$39.00 | Code HMAMFN | Ship $.38

Major Brand Dynamic RAM Chips!™

$Call | Code HCHIP8 | Ship $.19 | set of 8

256K— 41256 —150nSec., IC chips

Due to Dynamic RAM price changes, these prices are subject to available supplies. Call for current prices.

Mac Tool Kit™

$6.95 | Code HMD2TK | Ship $1.00

Here are all the tools you'll need to operate on your Mac. Included are:

- 1 Torx #15 wrench.
- 1 Macintosh Case Spreader.
- 1 Anti-static wrist strap.

BULLETIN BOARD

BBS-PC™
from Micro-Systems Software Inc.
$49.00 | Code SAM4BB | Ship $2.00

Use the Amiga as an electronic bulletin board system. All you need to get started as a sysop of your own board. Features:

- XModem upload and download
- Timer for length of call and no activity.
- Support of up to two modems
- Password support with multiple security levels

CAD/CAM

DynamicCad™
from Micro-Illusions
$319.00 | Code SAM2DC | Ship $3.50

DynamicCad offers the power of sophisticated Computer Aided Design to the average user. Use it to design houses, cabinets, and especially circuit boards.

Features:
- Parts data bases
- Autorouting of circuit boards
- Automatic schematic creation
- Works in the Amiga's hires mode (640x400)

DATABASE

DataMat 200™
from Transtime Technology Corp.
$129.00 | Code SAT6DM | Ship $3.38

A very powerful programmable, relational database. Was developed for MS/DOS, UNIX, and Vax at the same time as the Amiga.

- Fully relational
- Can be used to create specific applications
- Versions available that support picture fields

Superbase™
from Precision Software
$95.00 | Code SAP8SB | Ship $1.00

A powerful yet easy to use database. Fully uses the Amiga's Intuition user interface. Other Features:

- Text files or pictures can be a field
- Relational, allows queries using multiple files.
- Multiple indexes per file.

EDUCATION AND SIMULATIONS

Flight Simulator II™
from Sub-Logic
$35.95 | Code SAMFLS | Ship $1.00

Sub-Logic's Flight Simulator II comes to the Amiga in full force. All the features of the Mac and IBM simulators plus more. Fly a Cesna, Lear Jet, or world war II bi plane. Fly over places like San Francisco, Seattle, and New York.

Other features:
- Fly formation with another Amiga over a modem
- Enhanced screen update for smoother flight
- Enhanced sound

Galileo™
from Infinity Software
$49.95 | Code SASVGO | Ship $1.00

Explore the skies with this superb planetarium simulator. See constellations from any part of the sky. Find the locations of the important deep sky objects. Track the planets locations through the sky. Galileo is a must for any astronomy buff

Discovery™
from Micro Illusions

Discovery MATH™
$29.95 | Code SAM2MT | Ship $1.00

Discovery SPELLING™
$29.95| Code SAM2SP | Ship $1.00

Your trapped on a dissabled

spacecraft. To fix it you must collect 12 crystals. However, there are several small space creatures loose on the ship that you must avoid. Also, you must pass the security doors by answering questions.

There are two version of Discovery, a math and a spelling version.

GAMES

See also Electronic Arts

CinemaWare™
from Cinema Ware & Mindscape

CinemaWare is a series of games based on classic movie themes. Designed to make the player part of the action in a classic movie. Each game is different.

Defender of the Crown™
$37.00 | Code SAM4DC | Ship $.63

Become a 14th-century Saxon trying to drive the Normans from Britain. While saving damsels in distress. This game is a true showcase for the Amiga's graphics. (Uses the mouse)

Sinbad and the Throne of the Falcon™
$29.95 | Code SAM4SB | Ship $.75

Become the might Sinbad and save the Caliph's throne.
Sail your ship through reefs, shoot crossbows, fight the evil cyclops.

S. D. I.™
$29.95 | Code SAM4SI | Ship $.63

It's the future and the fate of the world rest in your skills. Can you hold off the the rebel KGB attack and save both the US and USSR. Will you rescue your secret love, the Commander of Soviet Space Station, before she is captured by the KGB.

MUSIC/MIDI

Soundscape Pro Midi Studio™
from Mimetics Corp.
$129.00 | Code SAMCSS | Ship $1.00

A professional midi sequencer for the Amiga. Take your creations from Deluxe Music and use this tool to run your midi instruments. Features:

- Piano keyboard display
- Easy icon system for routing output
- Record midi in for use with other Amiga programs

PROGRAMMING AIDS

Aztec C 3.4™
from Manx Software Systems

Aztec C has been the choice of many Amiga developers for over a year. The 3.4 version offers many features to the hobbyist and professional programmer. Features:

- Full C compiler and 68000 assembler
- Overlay Linker
- Amiga include files for both C and Assembler
- Developer's and Commercial versions come with a full set of utilities.

Aztec C professional system Optimized C, Assembler, Linker, Librarian, Libraries, Examples™
$152.00 | Code SAM5CP | Ship $3.00

Aztec C developer package Plus: debugger, make,diff,grep,support utilities™
$249.00 | Code SAM5CD | Ship $3.00

Modula-2™
from TDI Software
$65.00 Regular | Code SAT3MR | Ship $2.00

$109.00 Developer | Code SAT3MD | Ship $2.00

Developer is the Regular package plus: IFF & ILBM modules, symbol file decoder, link and load file disassemblers, and more.

Modula - 2 is considered the next step from pascal. Modula offers the strong yet flexible typing of pascal. While also offering easier access to the machine's lower levels than pascal.

True BASIC™ (Co-op bonus pack)
from True BASIC Inc.
$197.00 | Code SAT6TB | Ship $5.00

From the creators of BASIC comes True Basic. True BASIC offers all the features of BASIC plus, some of the block structure that other languages offer. True BASIC is a psudeo complied language. Programs written in true basic on the Amiga can be moved directly to the Mac or IBM with little or no modification.

Products included in Bonus Pack:
- True BASIC Language system
- True BASIC runtime package (for stand-alone applications)
- Amiga Developer's tool kit
- 3-D graphics module

SPREADSHEET

Analyze 2.0™
from Microsystems Software
$89.00 | Code SAMALZ | Ship $2.00

Analyze is a powerful spreadsheet for the Amiga. It offers all the regular spreadsheet functions plus:

- Sorting capability
- Macros
- A full set of business graphics including - histograms and 3-D piecharts (Can be saved to Deluxe Paint type file)

Maxiplan Plus™
from Oxxi Inc.
$99.00 | Code SAE1MP | Ship $1.00

Powerful spreadsheet, database, and business graphics program. Maxiplan uses the Amiga's capabilities well.
Features:

- Upto 8 color spreadsheets/ databases and graphs.
- Over 8,000 row
- Speech notes and help notes can be set for any cell
- Uses the Intuition interface
- Can be upgrade to Maxiplan plus, which offers macros

TELECOMMUNICATIONS

Online™

$45.00 | Code SAMONL | Ship $1.31

The most popular telecommunications program for the Amiga. Online offers a full set of professional features for serious telecommunications. Features:

- Terminal emulation for vt100 , vt52
- Keyboard macros
- Chat windows for interactive services

WORD PROCESSING

Scribble 2.0™

$63.00 | Code SAMSCR | Ship $2.00

Easy to use entry level word processor for the Amiga. Scribble has been the word processor for the Amiga during the last year. Features:

- Upto four documents at a time.
- Cut and Paste between documents
- 40,000 word spell checker.

Amiga HARDWARE

Your Co-op is an authorized Amiga dealer. Call the Co-op store at (206) 251-6787 for more information and prices on Amiga Computers.

Alegra 512K™

from Access Associates
$265.00 | Code HAA9AL | Ship $1.81

The Alegra is one of the most popular memory expansion units for the Amiga. It offers 512K of expansion now and can be upgraded to 2 Meg of expansion with the addition of 16 1 megabit chips.

- Auto Configures under 1.2
- small size
- zero wait states
- does not pass the port through.

Digiview 2.0™

from Newtech
$165.00 | Code HAN4DV | Ship $1.00

Digiview has been the standard for image digitizing on the Amiga. Digiview will digitize a still video image in under 30 seconds. Images can be created in resolutions up to 640 x 400 pixels. (Requires either a B&W or color video camera)

Perfect Sound™

from Micro Solutions
$69.95| Code HASBPS | Ship $0.88

Perfect Sound allows you to create both mono and stereo sound effects. Also allows you to create instruments compatible with Deluxe Music.

- Uses the parallel port.
- No pass through.

For Magnivox monitors see Generic Section of the catalog.

(also see Electronic Arts)

APPLICATIONS

Ability™
from Migent® Systems
$59.00 | Code SIBABL | Ship $2.00

The best value in an integrated software package for the PC! Includes 6 integrated programs:

- Spreadsheet,
- Word processor,
- Graphics,
- Database,
- Communications,
- Pesentation

The system is as close to a Mac and Switcher as you can get on a PC. Allows two programs to be memory resident at the same time, and a single keystroke switches between them. You can easily cut and paste (in this programs nomenclature pickup and put down) between them. Allows named fields so that that an update in one module automatically updates them in the other. The data base allows relational subsets between data. Supports CGA and Hercules compatible graphics. You can't go wrong with this program at this price.

Cloneware™ ALS 18C Financial Consultant™
from Advanced Logic Systems, Inc.
$59.00 | Code SIA3FC | Ship $.60

A memory resident program that performs these calculations:

- Calculator
- IRR
- Discounted Cash Flow
- Investment Analysis
- Loan Amortization
- Simple Interest
- Statistics
- Leasing
- Scientific Calculator
- Savings and Annuities
- Metric Conversions
- Break Even Analysis
- Depreciation
- Real Estate
- Bonds
- Dates
- IRA

Displays and prints a loan amortization table. This 'pop up' program requires 50K memory and DOS 2.0 or later.

Word Perfect™
from Word Perfect Corporation
$239.00 | Code SIGTWP | Ship $1.00

One of the standard professional word processing packages. Includes Spell-checking, Thesaurus, and On Line Tutorial and Help. Many printers supported including the Apple LaserWriter™. Easy index generation, mail merge, Table of Contents, and many many more features. Requires 256K, DOS 2.0 or higher and two drives or a Hard Drive. with one floppy.

R:Base® System V
from MICRORIM
$369.00 | Code SIM5RV | Ship $7.00

One of the most powerful relational datbases existing. A code generator called the Express System allows anyone who can use a spreadsheet or word processor to create programs that work in the real world. Uses a menu driven or procedural language to generate applications. Includes a flexible report generator that can be screen selectable. Contains import and export of DIF, SYLK, and ASCII files. Single license per file server in multi user applications. Recommended 640K and a hard disk.

Webster's New World Spelling Checker
by Simon and Schuster
$39.00 | Code SIS3SP | Ship $2.00

This program is based on Websters's New World Dictionary and Webster's New World Mispellers's Dictionary it corrects common mispellings others can't. It is compatible with most major word processors and text files produced by many application programs. It has over 110,000 words and allows replacement as the error is found.

SYSTEM

Microsoft Windows
Operating Environment
$70.00 | Code SIM3OE | Ship $2.24

A graphics environment for the MS DOS world. Allows an iconic based screen and multiple applications to be accesed and pass text and graphics between them. Includes Windows Paint and Windows Write and many resident applications. The program requires 320K memory, Dos 2.0 or higher two 5 1/4 drives and a graphics adapter card. Recommended is 640K, mouse, a hard drive and if color is required an EGA card.

Microsoft MS-DOS 3.2
Operating Environment
$99.00 | Code SI/D32 | Ship $4.00

The PC operating system. Comes with GW BASIC, complete documentation, and is supplied in 5 1/4 disks.

UTILITIES

COPY II PC
Central Point Software, Inc.
$25.00 | Code SIBCPY | Ship $.50

Protect your software investment by making backup copies. This program also allows many copy protected programs to be run from your hard disk. It verifies disk

copies and checks your drive speed. This version is fully automatic, no long parameter tables to load or check.

Norton Commander
from Peter Norton Computing
$59.00 | Code SIP5CM | Ship $1.00

A disk directory and program launcher manager. Uses a point and shoot method to perform your computer operations. Add your own menus for one key operations. List, Update, Delete, and Copy with speed, easy to use with keyboard or mouse.

Norton Utilities
from Peter Norton Computing
$49.00 | Code SIP5UT | Ship $1.00

The best known of the hard disk utility programs for the PC. Retrieves lost data and lets you manage and keep track of your data. List Directories, File Find, and Text Search are names of some of the commands. Other utilities measure available file space, test your disk for damage, and measure your computer's performance. "Don't compute without it."

PC Tools (Version 3)
Central Point Software, Inc.
$25.00 | Code SITOOL | Ship $.50

A DOS resident program containing over 20 utilities. Including:

- File Recovery
- View/Edit File Contents
- Fast Backup/Restore
- HD Compress
- Copy files, Disks, Format
- Search for files or text
- Map disk usage
- Mirror and Rebuild
- Reorganize Subdirectories

A very complete PC utilities program. Supplied in both 5 1/4 and 3.5 disks.

Sledge Hammer
from PROCOM
$95.00 | Code SIC6SH | Ship $.42

AN AT hard disk formatting program that breaks the 33Meg barrier. Allows the formatting of a high capacity drives under one volume up to 1024 Meg. Allows up to four seperately adressable patitions. Works with these MSDOS versions:

- IBM DOS 2.10, 3.00, 3.10, 3.20
- Compaq DOS 3.10
- AT&T DOS 3.10
- Toshiba DOS 2.11
- Works with no standard (non IBM AT caompatible) hard drives.
- Works with all controllers including SCSI and ESDI.

LANGUAGES

Microsoft® Fortran Compiler (V 3.31)
from MICROSOFT, INC.
$249.00 | Code SIM3FC | Ship $6 00

For Scientific and Engineering applications this system is based on the x3.9 ANSI 78 standard. It includes complex numerics, and double precision complex numeric data types and character substrings. Includes four math libraries, including support for 8087/287 coprocessor or alternate library for systems without the hardware math processor. It allows code written with Microsoft Pascal, Microsoft C, or Microsoft Macro Assembler to be linked for the best coding possibilities. Programs can use up to 1 Megabyte of memory and common blocks and arrays greater than 64K are available. Includes a compiler, runtime libraries, a linker and library manager. Requires DOS 3.0, 290K.

Microsoft® QuickBASIC 2.0
from MICROSOFT, INC.
$69.00 | Code SIM3QB | Ship $1.00

From the originators of the BASIC for microcomputers a compiled language. It includes a built in full screen editor. Allows programs larger than 64K by compiling modules and linking them together. Requires DOS 2.0, 256K and one double sided disk drive. Supports Microsoft® Mouse.

True BASIC™ (version 3.0)
from True BASIC, inc.
$49.00 | Code SITGTB | Ship $2.00

From the originators of BASIC, John Kemeny and Tom Kurtz, comes a much better, more powerful version of the language that has introduced millions to programming. True BASIC is faster, easier, and allows a structured approach to program development. It follows the proposed ANSI standard for BASIC, and features:

- A full selection of control structures.
- External procedures which can be compiled into libraries.
- Complete matrix algebra.
- A full screen editor
- Fully portable for IBM, Mac, and Amiga.
- Hercules graphics support.

Requires PC 128K, DOS 3.+ 192K. Libraries and RUNTIME packages available.

Turbo BASIC™
from Borland International
$65.00 | Code SIBLTB | Ship $1.00

The BASIC from the originators of Turbo Pascal. A complete development environment for the PC, combines interactive editor, fast memory to memory compiler, trace debugging system, and pull down menues for trace , message, run

and edit menus. A MicroCalc spreadsheet with source code is included.

ZBASIC™
from Zedcor
$69.00 | Code SIBZBS | Ship $1.00

The PC version of the II and Mac fast compiled BASIC. Yes, you can use the same source (text) code for all three computers including graphics. A review in the March 86 *Call -A.P.P.L.E.* gives more details.

BASIC TO ZBASIC™ Converter
from Zedcor
$14.00 | Code SIBPZC | Ship $.60

Converts your BASICA or CW BASIC program to ZBASIC. Generates a document file for those lines requiring hand conversion. A useful utility for those upgrading their programs to this compiled BASIC.

PUBLICATIONS

IBM PC: An Introduction to the Operating System, BASIC Programming and Applications
by Larry Joel Goldstein
A Brady Book
$16.00 | Code PIA4PC | Ship $2.00

This book is for people who want to learn MS DOS from a BASIC programmers view. Most of the text is about programing with good examples and explanations. If you are new to MS DOS another reference about the OS is recommended.

Using PC DOS
by Chris DeVoney
QUE Books
$18.00 | Code PIA4UD | Ship $2.00

A beginning tutorial to advanced reference guide on DOS. Well written, with good indexing to quickly find information. Good at explaining cryptic error messages. The command explanations are very complete and understandable.

Networking IBM PCs
2nd Edition
QUE Books
$17.50 | Code PIQ2NP | Ship $1.06

A superb guide to understanding the important issues of local area networks. Major topics covered are: Standards, Evaluation, Installation and Performance. Also covered are applications, internetworking, LAN-to-Mainframe connection, security, backup, and electronic mail.

PC-DOS Introduction to High Performance
by Peter Norton
Brady Books
$15.00 | Code PIA4PD | Ship $2.00

A beginner's guide written by the author of one of the most famous and useful PC programs: The Norton Utilities. This is a comprehensive book starting with computer concepts and going through to programming languages. Peter offers advice on software selection, and tips on avoiding operational mistakes.

Gravis Joysticks - IBM

$34.00 | Code HGENGI | Ship $2.00

The IBM version of this famous joystick. Includes a top mounted fire button, robust padded stick, centering, and individual fire buttons, sequencing. Built to "take it" in the arcade world. It requires a card with a standard IBM joystick adaptor with a DB-15 plug.

IBM Printer Parallel Cable (DB-25/CNT)

$20.00 |Code HIBCBL | Ship $1.00

Connect your IBM compatible parallel printer to your PC. A fully shielded cable with easy thumb tightened connections on the computer side (DB-25 male) and clips on the printer side (Centronics 36 pin connector). The cable is six feet in length.

IBM Modem Cable (DB-25/DB-25)

$17.50 | Code HIXXMC | Ship $1.00

A cable to connect your PC serial port (DB-25 female) to your external modem (DB-25 male). Uses pinouts in RS-232 protocol. The cable is 6 feet long.

Universal System Stand SS-3

by CURTIS

$27.00 | Code HIC3SS | Ship $2.00

Save desk space by mounting your CPU unit verically. Adjustable to fit XT's, AT's, Compaq's, and compatible. Includes a lifetime warranty. Light creme color plastic construction.

Cauzin Strip Reader - IBM

$159.00 | Code HIC454 | Ship $5.00

The IBM version of the strip reader. Requires a Serial port on the IBM. Includes the reader, connecting cable and software.

Internal Tape Backup 40MB for AT

by Alloy ATP-40

$399.00 | Code HIM340 | Ship $5.00

A half/height internal tape back up unit for the AT & compatables. Gray in color. It uses the floppy drive controller. Has a transfer rate of 500kbs and has complete software and instructions. Comes with one backup cartrige.

Tape Cartridge for 40MB.

$25.00 | Code HXDNBT | Ship $1.00

The cartridge for use in the Alloy ATP-40 tape unit. Also used in the Data Frame Tape unit.

Excel-Stream 60

by Everex

$895.00 | Code HIE5TB | Ship $9.00

A half/height iInternal tape back up unit for the AT & compatibles. Gray in color. Uses its own full slot controller. Backs up a full 60MB in 12 minutes. Comes with complete software that allows multiple backup sessions on a single tape and a Scheduler for autometic backup. Extensive and detailed manual with easy to follow instructions. Comes with one 3M DC-600A cartrige.

Tape Cartridge for 60 MB

$35.00 | Code HIE5BC | Ship $1.00

A 3M DC-600A cartridge for use in the Everex EXCEL -STREAM 60 tape backup.

Evercom™ II-PC 1200 Baud Internal Modem

$99.99 | Code HIE5E2 | Ship $2.19

A fully Hayes compatible modem that installs in a short slot of an PC/XT/AT and compatibles as COM1 to COM4. Operates at 300, 1200 BAUD. Includes BIT-COM software, a menu-driven communication program that stores 32,000 numbers, supports script files, and works in 132 column screen mode. Full documentation. and built in diagnostics. Plugs into a RJ11 phone jack and has a separate RJ11 jack for your extension phone. A good modem at a super price.

Evercom™ 24-PC 2400 Baud Internal Modem

$199.00 | Code HIE524 | Ship $2.25

A fully Hayes compatible modem operating at 300/1200/2400 BAUD. Installs in a short slot of an PC/XT/AT and compatibles as COM1 to COM4. It is fully compatible with the Extended Hayes command set, Bell 212A/103 and CCITT V.22 and V.22 bis compatible. Includes BIT-COM software, a menu-driven communication program that stores 32,000 numbers, supports script files, and works in 132 column screen mode. Full documentation and built in diagnostics. Plugs into a RJ11 phone jack and has a separate RJ11 jack for your phone.

Everex Magic I/O™ Board 17A

$62.00 | Code HIE57A | Ship $2.00

For AT and compatible. Installs in a short slot and gives one parallel and one serial port (with the option of one additional serial port). The parallel port is configurable as LPT1 to LPT3 (IRQ5 & IRQ7), with a DB-25 connector. The serial port is configurable as COM1 to COM4 (IRQ2 to IRQ4), and has a DB-9

connector. A DB-9 to DB-25 adaptor , complete manual , and utility software is included

EVEREX 17A 2ND SERIAL PORT

$23.00 | Code HIE5SA | Ship $1.00

This kit allows a second serial port for the EV-17A shown above. Includes a DB-25 connector and chips to expand the port.

Everex Magic I/O Board 17B

$79.00 | Code HIE57B | Ship $2.00

For AT and compatible. Installs in a short slot and gives one game, one parallel, and one serial port (with the option of two additional serial ports). The game connector is a DB-15. The parallel port is configurable as LPT1 to LPT3 (IRQ5 & IRQ7), with a DB-25 connector. The serial port is configurable as COM1 to COM4 (IRQ2 to IRQ4), and has a DB-9 connector. A DB-9 to DB-25 adaptor, complete manual, and utility software is included.

Everex 17B 2ND (or 3rd) Serial Port

$23.00 | Code HIE5SB | Ship $1.00

This kit allows a second (or third) serial port for the EV-17B shown above. Includes a DB-25 connector and chips to expand the port.

MatchPoint-PC

from Micro Solution, Inc.
$179.00 | Code HIMAMP | Ship $2.00

MatchPoint-PC provides an easy and effective means of linking IBM PC and compatible computers to Apple DOS 3.3 or ProDOS 8 diskettes. The MatchPoint PC card is a half-size card that mounts in one of the expansion slots and connects to the floppy drives. With the card in place, you simply put the Apple diskette into the PC floppy drive and read the data you want from, or write the data you have created onto the Apple disk for use on an Apple computer. It's that easy! MatchPoint also supports reading/writing CP/M format disks from many computers.

IBM PC RGB Monitor Cable

$25.00 | Code HIXXRC | Ship $.25

Fou use with the Magnaox monitor CM 515. Two feet in length.

Monochrome Graphics Card with Parallel Interface

$59.00 |Code HIB415 | Ship $2.00

A short card for the PC, XT, AT and compatibles. Includes standard monochrome graphics adapter with a Hercules compatible (720x360) graphics mode. The standard IBM parallel printer port (LPT1 or LPT2) is included. The printer port has a DB-25 female connector.

Color Graphics Card with Parallel Interface

$59.00 | Code HIB436 | Ship $2.00

A short card for PC, XT, AT and compatibles. Includes standard color graphics adapter. The standard IBM parallel printer port (LPT1 or LPT2) is included. The printer port has a DB-25 female connector.

Multigraph Display Card Expanded Function EGA Card

from Magnavox 8AV480
$249.00 | Code HIM1EG | Ship $2.00

A short card for PC, XT, AT and compatibles. Offers full compatability with the IBM EGA plus two new high resolution color display modes.:

- 640 x 480 16/64 colors
- 752 X 410 18/64 colors

It offers automatic mode selection between EGA, CGA, MDA and Hercules graphics modes. A short - slot form factor card using VLSI components. Incorporates 256K of video memory. All configuration switches accessible from the back panel. (This is the Video 7 VEGA card.) Requires a multi scan monitor for the new high resolution modes. Two year warranty

EGA Graphics Card

$179.00 | Code HII3HC | Ship $2.00

A short card for PC, XT, AT and compatibles. It provides all the featurs of the IBM EGA, CGA and MDA standard. Switches are located in the back for easy access. A good value in an EGA card. Based on the Genoa chip set.

Microsoft Mouse

Bus Version
$134.99 | Code SIM3BV | Ship $3.00

The Microsoft version of the mouse. It installs in any XT, AT or compatable slot. It uses 12K of RAM and requires DOS 2.0 or higher. It has two buttons and is contoured to fit your hand. Includes a tutorial and Expert Mouse Menu to adapt your favorate program (such as Lotus® 1-2-3®) to the mouse. Includes Paintbrush: a color drawing program and Show Partner: a graphics presentation program. These programs require 384K and a Graphics adapter card.

360K 51/4in Drive

from Toshiba
$99.00 | Code HIM6SD| Ship $2.00

The standard half height drive of

all PC compatibles. Uses 5 1/4 in diskettes in the DSDD configuration. Black face panel , with quiet drive mechanism.

1.2 MB 51/4in Drive

$129.00 | Code HI/HFD | Ship $4.00

The standard half height drive of all AT compatibles. Uses 5 1/4 in diskettes in the 2HD configuration. Gray face panel with quiet drive mechanism. Reads and writes 360K diskettes under DOS 2.0 or greater.

720K 3.5in Drive

from Toshiba
$129.00 | Code HI/3SD | Ship $4.00

A half height drive of all PC compatibles. Uses 3.5 inch diskettes . Comes complete with all mounting hardware for PC, XT, and AT installations. Either Gray or Black faceplates.

ST-225 20 MB Hard Drive

from Seagate
$289.00 | Code HI/S25 | Ship $3.00

A standard half height hard drive of all PC and compatibles. Black face panel. The drive has a 65 msec access. Requires a controller card for PC and XT., and works with all AT WDC controllers. A low cost entry in the hard drive market, or an additional hard drive.

40 MB High Speed Hard Drive

from CMS
$699.00 | Code HI/AT4 | Ship $6.00

A full height drive for all AT's and compatibles. The drive has a 22 msec access, which translates to FAST. Complete with software to allow a single partition to extend beyond the 33 MB barrier. Auto head park feature . Comes pre formatted, just plug into your AT and run.

AT Disk Controller

$149.00 | Code HIMWDC | Ship $2.00

A full length 16 BIT hard and floppy disk controller (WDC) for the AT and compatible. Supports 2 floppy drives (360, 720 or 1.2) configurations and two hard drives. Complete with cables for two floppy drives and one hard drive. Works well in the 286T computer from IDS.

The IBM PC Compatible Story

PC compatible systems from A.P.P.L.E. Co-op? YES . We have been selling these systems in our store with great success for about a year now , so we feel confident to allow distribution to all our members. The importer of these systems is Intelligent Data Systems of Paramount, California. They have a long track record of service and support in the IBM compatible market, and were chosen from over a dozen systems we studied for their compatibility, reliability, value, and availability. The computers are manufactured in Taiwan and assembled in the US.

Each system comes fully tested with all switch settings correct and peripheral cards installed. If a hard disk is chosen (at our prices how can you not afford to get one) the Licensed MS- DOS is installed and ready to run. Just unpack and compute. The expansion cards we have chosen work together and well with the systems.

These computers are among the best computing values in the market place today. They run all the major software packages without a hitch with superior performance in every respect to their namesake. If your computing world has spread to the PC you can now get them through your Co-op.

PC-286T

IBM AT Compatible Personal Computer

PC-286T Features Summary

- **CPU:**
  80286-10 Microprocessor standard; 6, 8, 10 MHz keyboard software selectable, optional socket for 80287 math co-processor.
- **BIOS ROM:**
  32KB, includes auto-self systems test when power is on.
- **RAM MEMORY:**
  512KB, 120Ns standard, expandable to 640KB or 1MB on the mainboard.
- **EXPANSION SLOTS:**
  Four layer mainboard, eight expansion slots - 6, sixteen (16) Bit 2, eight (8) Bit.
- **IBM COMPATIBLE!**
- **KEYBOARD:**
  Sculpted, eighty-eight keys, separate cursor keys, low profile, tiltable, convenient cord.
- **TIME DEVICES:**
  Real time clock/calendar, lithium battery backup; also features three user-programmable timers.
- **SOUND SYSTEM:**
  Programmable speaker is included.
- **CASE:**
  Metal construction, conveniently located LED Panel for desk-top (horizontal or vertical) configuration.
- **POWER SUPPLY:**
  192 Watts, 110/240 volts, 60/50 cycles.
- **OPERATING SYSTEM**
  MS-DOS 3.20 included. PC-DOS 2.0/2.1/3.0 also workable in PC-286T.
- **FCC & UL APPROVED**
- **PHOENIX BIOS INCLUDED**

For the more experienced user, the advanced technology PC-286T Personal Computer operates faster, thereby reducing waiting time. Other advantages include greater reliability, convenience, memory size and versatility over other comparable brands.

The PC-286T comes with a one year factory warranty.

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ids INTELLIGENT DATA SYSTEMS

Distributed By:

A.P.P.L.E. Co-op | **$839.00** | Code HIBATT | Wt. 55 lbs. | Ship $55.00

ELECTRONIC ARTS

EDUCATIONAL

First Letters & Words™
Amiga
$31.95 | Code SAE1FL | Ship $.50

Apple IIGS
$31.95 | Code SGE1FL | Ship $.50

Macintosh
$31.95 | Code SME1FL | Ship

Let your child explore the wonderful world of words guided by Ted E. Bear. There five activities including one centered around Dinosaurs! Also parents and teachers may customize the program to fit the child's needs.

First Shapes™
Apple IIGS
$31.95 | Code SGE1FS | Ship $.50

Ted E. Bear helps small children with shapes. Games drill child in shape recognition and let them create toys from geometric shapes.

Kid Talk™
Apple IIGS
$31.95 | Code SGE1KT | Ship $.50

A simple word processor for children that will read back what they have typed in. Child can adjust sound of voice.

Math Talk™
Apple IIGS
$31.95 | Code SGE1MT | Ship $.50

Let Professor Matt. E. Matics help your child learn math at their own pace. Several activities guide the child through beginning math. Built-in speech adds to the programs 'child-appeal'.

Math Talk Fractions™
Apple IIGS
$31.95 | Code SGE1MF | Ship $.50

The features of Math Talk now used to teach fractions.

Smooth Talker™
Amiga
$31.95 | Code SAE1ST | Ship $.50

Apple IIGS
$31.95 | Code SGE1ST | Ship $.50

Software speech synthesis. Allows you to create spoken messages and even teach the computer new words.

Speller Bee™
Apple IIGS
$31.95 | Code SGE1SB | Ship $.58

Your child has the choice of three games to help them in spelling. Use the built-in 150 word list or let your child enter spelling lists from school. Uses computer speech to add to the fun.

GAMES

Adventure Construction Set™
II,II+,IIe,IIc
$30.49 | Code SADCOM | Ship $.38

Amiga
$19.95 | Code SAMADV | Ship $.38

The most powerful graphic adventure generator.

- Maximum adventure size: 240 rooms, 500 creatures, 7500 props.
- 500 existing creatures and props.
- 30 sound effects, 13 magic spells.
- Pixel editor for drawing new graphics.
- Finish" option completes design automatically.
- Supports AppleMouse, Mockingboard, and Cricket.

Alternate Reality: City™
Amiga
$26.95 | Code SAE1AR | Ship $.50

Apple II, II+, IIe,IIc
$19.95 | Code S2E1RC | Ship $.50

Macintosh
$26.95 | Code SME1RC | Ship $.50

Alien kiddnappers take you away to a bizarre new world where your intelligence, dexterity, wisdom, charm, and health are all determined by the numbers - and your ability to escape (or exact revenge) depends on how you meet the challenges of life on their strange and wonderful planet. So much to explore that it takes two disks!

Alternate Reality: Dungeon™
Apple II, II+,IIe,IIc
$26.95 | Code S2E1RD | Ship $.50

Beneath The City is... The Dungeon. It's a world shrouded in mystery, where turning a corner can bring you face to face with apparitions from your worst nightmares. And just like in The City above, things aren't always what they appear to be.

Amnesia™
II+,IIe,IIc
$27.49 | Code S2E1AM | Ship $.38

IBM AT,XT,PC & Compatible
$27.49 | Code SIE1AM | Ship $.38

A strange woman wants to marry you. A strange man is trying to kill you. The state of Texas wants you for murder. But that's not your real problem. Your real problem is Amnesia!

- 4 disk sides.
- 1500 word vocabulary.
- Novel length manuscript.
- Nearly 4000 separate Manhattan locations including 650 streets.

Archon™
II,II+,IIe,IIc
$12.50 | Code S2E1AR | Ship $.38

Mac
$24.99 | Code SME1AR | Ship $.38

Amiga
$19.95 | Code SAMARC | Ship $.38

IBM-AT,XT,PC & Compatibles
$12.50 | Code SIBARC | Ship $.38

There's a board. There are pieces with varying powers, squares to move into and an opponent to conquer. But the squares keep changing. And once you decide where to attack, the board explodes into a battlefield. If you're smart, fast, dexterous and farsighted, you

may win. If you're not, look for another game.

Archon II: ADEPT™

II,II+,IIe,IIc
$24.49 | Code SARCON | Ship $.38

The unique Archon game system with new pieces and more strategy than the original Archon.

- Dungeon type pieces like sorcerers, gorgons, and wraiths.
- Handicapping system.
- For one or two players.
- Best Strategy Arcade game"- Family Computing.

Artic Fox™

II+,IIe,IIc
$26.95 | Code S2E1AF | Ship $.38

Amiga
$25.95 | Code SAMAFX | Ship $.38

The Arctic Fox is a deadly tank of the near future. You command its bone-crunching power on a rescue to the Arctic wastelands. The odds for your success? Lousy!

- 3-D battlefield.
- Accurate simulation of tank movement.
- Realistic Stereo Sound.

Auto Duel™

II,II+,IIe,IIc
$33.95 | Code S2AUTO | Ship $.38

Amiga
$31.95 | Code SAE1AD | Ship $.38

The first fast-action strategy role-playing game with cars. Instead of building up warriors and magic users, you build hot cars. Set in the future, where the right-of-way goes to the driver with the biggest guns!

- Based on Car Wars by Steve Jackson from Origin Systems.
- Such a classic it even has its own magazine.

221 B Baker St.™

Apple II, II+, IIe,IIc
$23.95 | Code S2E12B | Ship $.50

IBM
$23.95 | Code SIE12B | Ship $.50

Join forces with Sherlock Holmes, the greatest detective of all times! You'll meet assistant, Dr. Watson, Inspector Lestrade of Scotland yard; and the legendary Irene Adler as the four challenge each other to solve 30 of the most intriguing cases ever faced by these super sleuths.

The Bard's Tale™

II, IIe, IIc, II+
$29.95 | Code S2BARD | Ship $.38

Amiga
$31.95 | Code SAE1BT | Ship $.38

Apple IIGs
$33.95 | Code SGE1BT | Ship $.50

Fans of Wizardry and Ultima, get ready. The Bard's Tale is the best fantasy role-playing adventure game of all time. Bigger, faster, deeper, and smarter than any game of its kind. Set in a city of Scara Brae, it includes 16 maze levels in 3-D color. With its unprecedented depth and greater emphasis on strategy, The Bard's Tale is the new standard against which all other fantasy games must be measured.

The Bard's Tale II™

Apple II, II+, IIe, IIc
$29.95 | Code S2E1BR | Ship $.50

A new tale from the Bard. Experience new challenges and meet new characters plus many of your favorites from the original Bard's Tale

Battlefront™

II+,IIe,IIc
$27.49 | Code S2E1BF | Ship $.56

A recreation of land battles from the Second World War.
Four separate scenarios are included. Crete (1941), Stalingrad (1942), Saipan (1944) and Bastogne (1944-45)

- Complete range of unit types including infantry, armour, anti-tank artillery,parachute etc.
- Play against the computer or a friend.

Battles in Normandy™

Apple II,II+,IIe,IIc
$26.95 | Code S2E1BN | Ship $.81

The 1944 Allied invasion of Normandy - and the two months of hard fighting that followed it - come to life with these eight historic battles.; Omaha, Utah, Carentan, Sword, Cherbourg, Goodwood, Epsom, Villers Bocage. It's World War II strategy and action as only the Battlefront Game System can make it happen!

- Action takes place on historically accurate, full hex-grid map of Normandy Peninsula
- Campaign structure allows linking of scenarios
- Introductory tutorial gets you into the game quickly
- Edit any scenario for historical analysis, or use the "battle construction set" to create completely new battles!

Black Cauldron™

Amiga
$26.95 | Code SAE1BC | Ship $.50

Based on the Disney classic finally available for the Amiga!

Carriers at War™

from Strategic Studies Group
II+,IIe,IIc
$32.95| Code SCRAWA | Ship $1.00

The most accurate WW II strategy game of the Pacific.

- 7 built-in scenario from Pearl Harbor to Coral Sea
- Accuracy of military forces, geography, battle conditions and weather.
- Maps and aid cards included.
- "Best War Game of 1984" - Computer Gaming World.

Chessmaster 2000™

II,II+,IIe, IIc
$26.49| Code S2CHS | Ship $.50

Mac
$31.00 | Code SMCCHS | Ship $.50

Amiga
$29.95 | Code SAMCHS | Ship $.50

IBM-AT,XT,PC & Compatibles
$24.49| Code SIBCHS | Ship $.50

ELECTRONIC ARTS

Chessmaster 2000 is highly rated by the U.S. Chess Federation. 3-D graphics, 12 difficulty levels, teach mode, hint mode. Think mode lets you watch the computer evaluate moves. Even lets you take back moves all the way to the beginning of the game. Classic game library replays 100 of the most famous games in history such as the Kasparov/Karpov Championship and Chessmaster 2000 vs. Sargon III, L.A. CA, 1986.

EOS: Earth Orbit Station™

Apple II,II+,IIe,IIc
$23.95 | Code S2E1ES | Ship $.50

What would you do if you ran NASA? EOS puts you in charge of the next 50 years of space development - from building and managing space stations and lunar colonies, to the ultimate adventure: the search for alien life. The technology exists now. The planets and moons are out there waiting for you to explore - and exploit. What happens from here on out is entirely up to you.

Europe Ablaze™

from Strategic Studies Group
II,II+,IIe,IIc
$30.49 | Code S2BLAZ | Ship $1.00

The air war over England and Germany 1939-45. You can take the role of Commander of the Air Force, or any of five subordinate positions on either side.

- From 1 to 12 players!
- You can plan the missions: Bombing, Fighter, Patrol, or Raiding.
- Fight the Battle of Britain and two other scenarios or design your own battles.
- Includes 24 aircraft types, 255 squadrons, 127 air bases, 63 radar stations, and much more.

Golden Oldies™

II,II+,IIe,IIc
$24.95 | Code S2OLD | Ship $.69

Amiga
$23.95 | Code SAMOLD | Ship $.69

Play and learn from four of the greatest games of all time-in their original, uncut, officially endorsed versions!

- Adventure — The one that started them all.
- Eliza — Your very own psychiatrist at home.
- Life — A window onto an alternate universe.
- Pong — The game that forever changed the way we play.

Grand Slam Bridge™

IBM-AT,XT,PC & Compatibles
$36.49 | Code SIE1GB | Ship $.69

Now you can play a challenging game of bridge no matter how many players you have. Play solitaire, practice communication skills with a partner, or play with three humans and a computer fourth. Great for the beginner. An excellent way to sharpen your bridge skills.

Gridiron 1.2™

Amiga
$39.95 | Code SAE1G1 | Ship $.25

Become coach and most valuable player on your own football team. Gridiron is not an arcade game but a real-time football simulation. Choose from over 40 plays in the GridIron Playbook, or design your own. You can even hold a draft to build a new team. 1 or 2 players.

Lords of Conquest™

Apple II, II+, IIe, IIc
$26.95 | Code S2E1LQ | Ship $.69

Your chance to conquer the world! Work against the computer in a struggle for world domination. A strategy game much like the popular board game RISK™.

Mad Libs™

Amiga
$13.95 | Code SAE1ML | Ship $.38

Apple IIGS
$13.95 | Code SGE1ML | Ship $.38

Popular party game comes to the computer. Eight illustrated stories are told using words supplied in advance. Create stories about quick brown turtles, or smelly, small, boats.

Marble Madness™

II+,IIe,IIc
$23.95 | Code S2E1MM | Ship $.44

Amiga
$31.95 | Code SAE1MM | Ship $.63

The game that drove them crazy at the arcades now comes home. Same exciting game play, same blow-away graphics, sounds and music. A unique game experience that's crazy fun for everyone. Two player race to the goal line, or one player races against the clock. It's sports, kinetics and strategy!

- Six different levels of raceways.
- Fantastic 3-D terrains.
- The ultimate in exciting non-stop action.

Mindmirror™

II+,IIe,IIc
$21.49 | Code S2E1MD | Ship $.75

IBM-AT,XT,PC & Compatible
$21.49 | Code SIBMND | Ship $.75

An innovative, dynamic game bringing a whole new concept to "personality" software. Written by Dr. Timothy Leary, famous Harvard psychologist, author and lecturer, Mind Mirror combines the science of Leary's psychometric studies with his own inimitable wit and charm. Part tool, part game and part philosopher on disk. A provocative game perfect for parties or social gatherings like the popular board games "Scruples"™ or "Trivial Pursuit"™

Moebuis — The Orb of Celestial Harmony™

from Origin Systems
II,II+,IIe,IIc
$39.95 | Code S2MOEB | Ship $.50

From the creators of Ultima comes a new dimension in fantasy role-playing games. Moebius is a danger filled adventure through a complex and colorful Oriental world of magic, mysticism, and intrigue.

- Action-arcade duels in 3-D

hires graphics.
- Interaction between magic and character moves.

Murder Party™
II+,IIe,IIc
$24.49 | Code S2E1MP | Ship $.63

IBM-AT,XT,PC & Compatibles
$24.49 | Code SIE1MP | Ship $.56

Everything you need for a great theme party for 6 to 8 players. Choose one of two mysteries provided, use the computer to personalize the mystery to you and your guests. Then print out all of the personalized materials including invitations, clue sheets, capsulized biographies and backgrounds. Over a dozen sheets per player-and all information refers directly to them. No one knows from game to game who the murder will be, not even the murder.

Ogre™
II+,IIe,IIc
$26.95 | Code S2E1OG | Ship $.63

A computer strategy game for one or two players. In the 21st century, where battlefields are dominated by speedy hover craft and heavily armored tanks that hurl tactical nuclear devices across miles of crater and rubble-strewn terrain, there is one tank more horrifying than all the others: the OGRE. Can you defend yourself?

One On One™
II,II+,IIe,IIc
$12.50 | Code S2ONE | Ship $.50

Mac
$19.95 | Code SMCONE | Ship $.50

Amiga
$12.50 | Code SAMONE | Ship $.50

The number one sports simulation of all time. This program gives you the intoxicating feeling of actually getting to play one of these basketball superstars. You get to take all the skills and characteristics of either Bird or the Doctor: all their special moves, their shooting abilities, their rebound skills, their strength stamina and speed.

What happens when you get two all-stars like these together, and get them to help you design a software game ? You get "Game of the Year" and 5 other awards, and a smash best-seller.

Patton vs. Rommel™
Mac
$26.95 | Code SME1PR | Ship $.50

This is the newest war game from the creator of Eastern Front and Balance of Power, Chris Crawford. You are the commander of either Axis or Allied forces during Operation Cobra. Each unit in Patton vs. Rommel is a division and each turn represents one day. Especially well designed for the Macintosh, the attractive map and easy to use command dialogues are terrific enhancements to the art of computer war gaming.

PHM Pegasus
from Electronic Arts
64K Apple II+,IIe,IIc,IIGS
$22.95 | Code S2E1PG | Ship $.56

"Fly" the deadly hydrofoil warship of the jet age, the PHM Pegasus. So agile, enemy radar mistakes it for a helicopter. So fast, the enemy has only minutes to react. So deadly, there is no second chance.

- Authentic speed and handling characteristics of three NATO ally hydrofoils: U.S., Italian and Israeli.
- 8 real-life missions in today's danger zones.
- Comprehensive operations manual includes mission briefings and enemy vessel spotter reports.
- Technical consultant: Commander Vern Saliisbury, Cheif Hydrofoil Test Groups, Boeing Marine systems.

Pinball Construction Set™
by Bill Budge
II,II+,IIe,IIc
$10.95 | Code SPBCS | Ship $.50

Mac
$19.95 | Code SMCPCS | Ship $.50

IBM-AT,XT,PC & Compatibles
$12.50 | Code SIE1PB | Ship $.38

Create your own video pinball games. In a class by itself. The most award winning home software product in history. It's been called the best program ever written for an 8-bit machine. Pure sheer unadulterated power to create the pinball games of your dreams, save them and show them off.

The all time classic.

Quizam™
Amiga
$23.95 | Code SAE1QZ | Ship $.50

QUIZAM is the only trivia game that utilizes the true power and the real nature of the computer. Eight mysterious dark satellites orbit the Earth and must be destroyed. Their onboard computers have malfunctioned, generating an enormous volume of questions which are strange, cryptic — even trivial. Your extensive knowledge must be combined with careful strategy if you are to succeed in this mission.

Only QUIZAM has QUIZZER, a full-featured program which allows you to create your own question diskettes! Other question diskettes are available including Science Fiction, The Boob Tube, Rock-On, and Dynamic Decades.

Radio Baseball™
IBM-AT,XT,PC & Compatibles
$24.49 | Code SIE1RB | Ship $1.00

You are the General Manager. Choose the line up, position fielders. decide when to start action in the bull pen. Hold your own drafts and make your own trades. Create the team of your dreams! You have complete control. Baseball realism at its best. It's all there from calling a triple steal to the suicide squeeze. Games can go into extra innings, players can even get hurt. Pitchers tire and relievers must be warm to be effective.

Reach For The Stars™
from Strategic Studies Group
II,II+,IIe,IIc
$29.95| Code SRFSTR | Ship $.50

The most strategically challenging Sci-fi game ever.

- Conquer the galaxies:54 star systems, 100+ planets.
- Manage population, environment, economy, space fleet design and production, and war operations.
- Galactic maps and data cards included.
- "Best science fiction game for the thinking person"- Science Digest.

Ring Quest™

II+,IIe,IIc

$26.95 | Code S2E1RQ | Ship $.63

Having been chosen as the bearer of the Ring Of Order, you must track down the elusive Lisa in an effort to put an end to the havoc caused by the Ring Of Chaos. Your only tools are your wits, the Ring Of Order, and the strong right arm of Gorn. You will need all of these and more to survive.

- Two full scale arcade games in one.
- Over 100 locations.
- Over 80 illustrations some animated.

Robot Rascals™

II+,IIe, IIc

$29.95 | Code S2E1RR | Ship $.75

First you deal the cards. Choose your robot, then send it on a competitive scavenger hunt through a dangerous computer playfield. The item cards tell you what to hunt for. Simple? Well, it would be- if the luck cards didn't keep wrecking your hand. And if the other robots didn't steal from you.

Russia: The Great War In The East 1941-1945™

II, II+,IIe,IIc

$26.95 | Code S2E1GW | Ship $.63

Recreate the conflict that changed the course of the war!

- Assume supreme command of German or Russian forces or elect to command one or more groups
- Historical re-play lets you watch battle unfold as it happened
- Four year campaign scenario plus design kit to vary economic and military parameters
- The standard for historical gamers

Seven Cities of Gold™

Amiga

$25.95 | Code SAMCOG | Ship $.50

An exploration and resource management game about the Spanish Conquistadors.

- Historically and Geographically accurate.
- Captures Conquistadors' problems of supplies, navigation, communication, and native interaction.
- Automatic computer mapping.
- Random continent generator creates infinite new world scenarios.
- 3 program of the year awards.

Sky Fox™

II,II+,IIe,IIc

$27.95 | Code SSKYFX | Ship $1.00

Mac

$25.95 | Code SME1SK | Ship $.63

Amiga

$25.95 | Code SAMSKY | Ship $.50

A action strategy game of flying and fighting to protect your homebase.

- Breathtaking graphics and high speed animation.
- 15 scenarios and 5 levels of difficulty.
- Air to ground tank combat and air to air jet dog fights.
- Working gauges and on-board computer.
- Supports Mockingboard and Cricket.
- "Best Arcade/Shoot-em-up" - Family Computing

StarFlight™

IBM-AT, XT, PC & Compatibles

$34.95| Code SIE1SF | Ship $.81

Boldly go where no game has gone before! Explore 270 star systems and 800 planets with unique ecosystems. Interact with alien races, each with unique languages and cultures. Choose and train your own crew. Includes animated graphics of rotating planets, landing sequences and more.

Ultima I Machine™

$26.95 | Code S2E1UI | Ship $.75

The classic fantasy role playing adventure.

Ultima III: EXODUS™

from Origin Systems

II,II+,IIe,IIc

$36.49 | Code S2UL3 | Ship $1.00

Mac

$39.95| Code SMCUL3 | Ship $.75

Amiga

$36.49 | Code SAE1U3 | Ship $1.00

The epic fantasy role-playing masterpiece. Over 90 weeks on the best seller charts.

- Select from a 20 character roster, with individual player movement.
- Many weapons, armor, and magic spells.
- Full patterns with advanced dungeon graphics.
- Adventure — style verb entry.

Ultima IV — The Quest of the Avatar™

Amiga

$37.95 | Code SAE1U4 | Ship $.50

II,II+,IIe,IIc

$39.95| Code S2UL4 | Ship $1.00

IBM-AT,XT,PC & COMPATIBLES

$36.49 | Code SIE1U4 | Ship $1.00

The long awaited sequel to Ultima III. Sixteen times larger than any game in the series. Familiar Ultima interior and surface graphics, with much bigger status and transaction screens. A new story line in a new world. Includes ruins and other kinds of places to visit. New kinds of spells. Better combat sequences. New kinds of monsters. Better animation. From OriginSystems.

Wilderness™

II,II+,IIe,IIc

$35.00 | Code SWILDE | Ship $.75

A survival training simulation in the Sierra Nevada mountains.

- 3-D color graphics with 360 degree first person scanning.
- Scientifically accurate simulation of native plants and animals, human physiological response, weather and topographical mapping.
- Two survival scenarios and "research mode."
- Editor for custom weather conditions, time of year and topography.
- A unique kind of computer application.

World Tour Golf™

IBM-AT,XT,PC

$30.49 | Code SIE1WG | Ship $.63

Imagine playing golf on more than 20 of the world's greatest courses, all on the same day. Start in Scotland, on the challenging links of St. Andrews. Next, how about Georgia, and the lush greens of Augusta? End your day on the shores of the Pacific Ocean, at beautiful Pebble Beach. And when you've mastered the world's best, no problem, simply design your own "soon-to-be" classics.

GRAPHICS

Art Parts Vol. I & II™

from Electronic Arts
Apple IIGS

Art Parts Vol. I
$21.95 | Code SGE1A1 | Ship $.38

Art Parts Vol. II
$21.95| Code SGE1A2 | Ship $.38

Add another dimension to your artistic talents with the selection of "clip art" on these two picture packed volumes for use with Deluxe Paint II.

Volume I comes complete with over 150 specially designed images from seven categories including: maps, graphs, faces, Africa, aliens, dinosaurs and birds.

Volume II contains over 125 images from twelve categories including: astronomy, military, interiors, sea, people, lettering, shuttle, stores, man-made items, farm, nature, and miscellaneous.

Deluxe Paint II™

from Electronic Arts
Apple IIGS

$67.95 | Code SGE1P2 | Ship $1.25

"The Best Graphics Program of the Year" — The Software Publishers Association. This is the graphics program that will blow all the others away. Features include:

- Zoom in to see your painting in four levels of detail.
- Create custom gradient color ranges from a pallet of 4096 different colors.
- Master the third dimension with exclusive 3-D perspective tool.
- Soften jagged edges and color transitions with smoothing tool.

With Deluxe Paint II and an Apple IIGS, you could only dreamed of before.

Deluxe Paint 2.0™

Amiga

$84.95 | Code SAMDXP | Ship $1.44

The premier graphics program of the Amiga. Supports pictures larger than the screen (approx. 1020X768). Works in all the resolutions of the Amiga. Includes the ability to protect the background, protect colors, and does automatic perspective. A must for any Amiga owner.

Deluxe Print™

Amiga

$63.95 | Code SAMDPR | Ship $1.00

A full powered printing tool for the Amiga. Like having your own printing shop.

- Create signs, calendars, banners, greeting cards, and letter head.
- Edit and design graphics with Deluxe Print or import images from Deluxe Paint.
- Print in B&W or full color.

Deluxe Video V1.2™

Amiga

$85.95 | Code SAE1DV | Ship $1.00

Turn your Amiga into a video studio. Create Animated features, rock videos, or even education presentations. You might also just use it to add titles to your home videos. New 1.2 version supports overscan and smooth scrolling.

Movie Maker™

II,II+,IIe,IIc

$26.95 | Code S2MOVI | Ship $.50

Create your own animated movies that look like they were done by professional animators. Ten built-in movies act as tutorials to help you quickly master the art of animation. You can animate your own drawings or use the hundreds of built in pictures.

- Includes 3 hilarious Gahan Wilson cartoon movies.
- Record your creations on disk or onto your VCR.
- Built in sound library for adding special effects to your movies.
- New kind of Creativity Software for your Apple.

Video Title Shop™

Apple II, II+, IIe,IIc

$19.95 | Code S2E1VS | Ship $.50

Combine your computer's graphic power with your VCR to create colorful title screens and artwork for your business, school or home videos! Create color title screens using the Micropainter Plus program included. Then use the video transfer program to insert your artwork into your video tape.

- Straight forward interface
- Choose from a variety of font styles and sizes or design your own fonts
- Import picture backdrops from other paint programs
- Joystick required

Video Title Shop - Graphics™

Apple II, II+ ,IIe, IIc

$13.95 | Code S2E1VG | Ship $.50

Ready-to-use graphics for Video Title Shop.

ELECTRONIC ARTS

MUSIC

Deluxe Music Construction Set™

Copy Protected
Amiga
$65.95 | Code SAE1M2 | Ship $1.00

Mac
$62.95 | Code SME1M2 | Ship $1.00

Deluxe Music Construction Set has been completely revised from its successful predecessor. DMCS now supports step mode input using MIDI keyboard or onscreen piano keyboard, and Real-time MIDI input with compatible sequence software. It also supports true desktop music publishing with the "Sonata" LaserWriter font (included). Other features:

- Note feedback during editing.
- Multiple time and key signatures in a piece.
- 27 instruments with multiple play styles.
- Instrument editor: envelopes, waveform, etc.
- Dynamic range from ppp to fff.
- Play speed from 1 to 240 beats/minute.
- WYSIWYG editing.
- Supports any Mac font for lyrics.
- Reposition notes, chords and beam ends.
- Stretch space within, above, and below each staff.
- 4 voice playback on Mac internal speaker.

Instant Music™

Amiga
$32.00 | Code SAE1IM | Ship $.75

Apple IIGS
$33.95 | Code SGE1IM | Ship $.56

Now even a musical novice can play and compose great-sounding music immediately! Instant Music is a unique way to make music, using artificial intelligence to make sure you never play or compose a wrong note. Features include:

- Over a dozen digitized instruments
- Up to twelve voices at a time with the amazing IIGS sound quality
- Over 40 songs of all types from classical to 80's rock.
- Supports Apple standard music and instrument files for compatibility with other music programs.

Music Construction Set™

from Electronic Arts
256K Apple IIGS
$31.00 | Code SGE1MC | Ship $.50

New for the Apple IIGS this version of MCS features:

- 16 digitized instruments
- MIDI music output
- Supports MDIdeas' SuperSonic Card for full stereo output.

Music Data: Its Rock & Roll™

Apple IIGS
$19.95 | Code SGE1MD | Ship $.50

New music and instruments for Instant Music, Deluxe Music Construction Set, and Deluxe Video.

40 new songs from the most exciting and important eras in rock history!

- Memphis 1956 - early rock 'n' roll
- Philadelphia 1959 - Early pop
- Detroit 1962 - Chicago 1965 - Blues rock
- San Fransisco 1968 - Acid rock
- More!

New digitized instruments! Play with 18 of the most sought after sounds, all studio recorded and digitized for state-of-the-art sound quality.

- Male chorus
- Female chorus
- Electric guitar
- Jazz guitar
- Synthesizer sounds
- LesPaul guitar
- Much,much more

PRODUCTIVITY

Financial Cookbook™

II,II+,IIe,IIc
$30.49 | Code SFINCB | Ship $1.00

Mac
$29.95 | Code SFCBMC | Ship $1.00

Amiga
$29.95 | Code SAMFCB | Ship $.38

Sophisticated but easy-to-use home financial calculator. Offers 32 recipes covering the most frequently asked questions on:

- Taxes and tax shelters.
- Lease versus buy.
- Amortization schedules.
- Auto and home financing.
- Inflation.
- Investments, savings, and IRA accounts.
- Superb documentation.

Get Organized™

IBM-AT, XT, PC & Compatibles
$60.99 | Code SIBORG | Ship $2.00

A set of desktop utilities for the IBM-PC and , each with its own window. Includes calendar, word-processor, phone book and more.

MaxiPlan Plus™

from Maxisoft & Electronic Arts
Amiga
$99.00 | Code SAE1MP | Ship $1.31

- Full color spreadsheet, database, and chart software.
- Enter formulas, change styles, colors and more using only the mouse.
- Cells can change color based upon the values in the cell or surrounding cells.
- Create full color business charts compatible with Deluxe Paint & Deluxe Print.

CAUZIN STRIP READER

Cauzin Strip Reader™
from Cauzin Systems, Inc.
Apple II,II+,IIc,IIe
$149.00 | Code H2C45R | Ship $5.00

Mac
$129.00 | Code HMC45R | Ship $5.00

IBM and compatibles
$149.00 | Code HIC454 | Ship $5.00

The Cauzin strip reader gives you a convenient way of copying programs from sources printing Softstrips. You can avoid the tedium of entering long programs into your computer by hand. Included is a free one year membership to the StripWare Club. Benefits include free software mailed to you monthly. With this program you can create your own softstrips with an Apple ImageWriter, Epson FX or RX printer. No special hardware is required to use the reader on a IIe. To print strips on a IIe, you'll need a Super Serial card, Grappler, or Dumpling graphics card (or equivalents).

DISK DRIVES 800K, 3 1/2"

800K Apple/Mac Drive™
from Chinon
$199.00 | Code HMCDRB | Ship $3.00

This same quality drive works on the Macintosh and on any Apple II+, IIe, IIGS when used with the Central Point disk controller card. (Not compatible with IIGS internal port)

- 800 KBytes formatted.
- Single push loading and eject.
- Low power consumption.
- 1 year factory warranty.

MODEMS

Avatex 1200hc Modem™
$125.95 | Code HXA4MD | Ship $3.00

The Avatex 1200hc delivers advanced features found in professional data communications networks-such as high data reliability and Bell 212A compatibility, and it's so flexible you can use your own preferred communications software. At a price like this you will not find a better value. More features:

- Auto-Answer, dial and redial.
- Automatic speed detection.
- Complete diagnostics.
- BASIC programs for quick access.
- Extended one-year warranty
- Internal speaker.
- Full Hayes communication compatibility.

Discovery 2400 Baud Modem™
DataTronics Technology, Inc.
$249.00 | Code HXD3DS | Ship $3.75

The Discovery 2400 is a flexible and powerful Stand alone modem featuring a Hayes compatible command set and providing both auto-answer and auto-dialing capabilities. It can both touch-tone and pulse dial telephone numbers, and is approved in the U.S. by the Federal communication Commission (FCC) for direct connection to any telephone system in the United States. Features include:

- Fully Hayes compatible
- Auto answer, auto-dial-redial
- LED indicators provide feedback regarding current status of modem's operation
- Built-in speaker
- 300-2400 baud capabilities
- Voice/data switching
- Built-in diagnostics

MultiModem AH2™
from MultiTech systems
$279.00 | Code HMODHC | Ship $5.00

Here is the 1200 baud intelligent modem you have been looking for! This modem is 100% Hayes Smart-Modem compatible with auto-dialing, auto-answering, and much more. The AH2 stores 10 31-digit phone numbers. Backed by Multitech Systems full two-year warranty. Requires serial interface card for II,II+,IIe and cable for Mac or IIc. Includes over $350.00 worth of free database time. Supports

Modem Magician and AE Pro among others for II family. Mac Terminal, Red Ryder and others for Mac.

MultiModem 224AH™
from MultiTech systems
$499.00 | Code HMO224 | Ship $5.00

Here is the intelligent modem that runs three different speeds; 300,1200 and 2400 bits per second. It features autodial automatic answer, Hayes-compatibility, and a memory for frequently called numbers. The MultiModem 224 is compatible with all the important modem standards used in personal computer and terminal data communications, including the Bell/AT&T 212a and the CCITT V.22bis. Databases and networks nationwide are now upgrading to 2400 bps. This is the modem for today's and tomorrow's telecommunications.

MONITORS

Magnavox Professional Multimode RGB Color Display
Model 8CM873
IBM PC, PC/XT, PC/AT, PC Jr, Amiga PC
$499.00 | Code HXM1MM | Ship $31.00

Features include:

- Automatically displays video Monitor information in 15-34 kHz (3-step) range
- Switch selectable Digital or Analog video signal
- Automatically adjusts to sync type (Positive, Negative, Combined)
- Non-glare high-contrast picture tube
- 926x580 pixel resolution
- Green text display switch

Magnavox 8CM515 RGB/Composite Professional Color Monitor 80™

Monitor with cable for the Amiga
$299.00 | Code HAM3RG | Ship $37.00

Cable only for Amiga
$21.00| Code HAXXRC | Ship $.81

Monitor with cable for the IIgs
$299.00 | Code HGM3RG | Ship $37.00

Cable only for IIgs
$15.95 | Code HGXXRC | Ship $.81

Monitor with cable for the IBM-PC and compatibles
$299.00 | Code HIM3RG | Ship $37.00

Cable only for IBM and compatibles
$19.95 | Code HIXXRC | Ship $.81

This is an economical, high quality RGB monitor that is IIgs compatible. In side by side tests, this monitor compares extremely well with Apple's new color analog RGB monitor. Features include:

- 14" tube; 17% larger screen than 12" monitors.
- TTL RGB (IBM), Analog RGB, Composite Video inputs.
- Green display switch for monochrome emulation.
- Etched Faceplate reduces screen glare.
- Dark Glass CRT improves contrast.
- 640 x 240 resolution.
- Image size and position controls.
- Built-in tilt stand.
- 2 year parts and labor warranty.

Olympia Amber Monitor™
$61.95| Code HXO1AM | Ship $18.00

Excellent quality 12" monochrome monitor made by NEC has 20 MHz bandwidth for crisp display. Allows you to connect a color monitor at the same time.

NETWORKING

PhoneNet™
from Farallon Computing
Price is per connection box.
(Nine Pin; PN209)
$38.00 | Code HMBAPN | Ship $2.00

(Eight Pin; PN208)
$38.00 | Code HMBAPE | Ship $2.00

You don't have to do it Apple's way. AppleTalk is a concept not a twisted pair of wires sheathed in Teflon. Why should you have to string wires over ceiling ducts or under basement plumbing, when your phones already connect your work place, point to point?

Farallon PhoneNet is an inexpensive and space efficient AppleTalk system. It is attached directly to your phone system. Two wires of most phone connections are not used by the phone company. Farallon has developed their own AppleTalk connection device which attaches between the phone wall jack and your phone. Connection boxes are available for every type of Apple computer or peripheral.

The 9-pin box, PN209, is compatible with the 128K Mac, 512K Mac, 512KE Mac, LaserWriter, and LaserWriter Plus.

The 8-pin box, PN208, is compatible with Mac Plus, Mac SE, Macintosh II, ImageWriter II, Apple IIgs, Apple IIe (with AppleTalk card).

PRINTERS

MT85/MT86 Professional Printers™
from Mannesmann Tally

MT 85 IBM® Emulation
$399.00 | Code HXMT5I | Ship $22.00

MT 85 Epson® Emulation
$399.00 | Code HXMT5E | Ship $22.00

MT 85 Apple ImageWriter® Emulation
$399.00 | Code HXMT5A | Ship $22.00

Add an additional $25.00 when ordering Apple ImageWriter Emulation.

MT 86 IBM® Emulation
$459.00 | Code HXT6I | Ship $28.00

MT 86 Epson® Emulation
$459.00 | Code HXMT6E | Ship $28.00

MT 86 Apple ImageWriter® Emulation

$459.00 | Code HXMT6A | Ship $28.00

Add an additional $25.00 when ordering Apple ImageWriter Emulation.

Designed to cope with the varied demands of today's personal computers and their associated software, these two printers are not only compact in size but set new standards in quiet operation. Dual print modes are standard. High speed draft mode at 180 cps and high quality correspondence print at 45 cps. Further print flexibility is achieved by selecting features such as superscripts and subscripts, compressed or expanded print and a variety of different graphics modes. Other features include:

- MT85-80 columns.
- MT86-136 columns. (Wide Carriage)
- Optional plug-in correspondence typestyle cartridges.
- Modular interfaces for IBM®, Epson®, and Apple ImageWriter® emulation.
- Choice of easy-to-change fabric or film ribbon. cartridges.
- Full addressable graphics.
- Easily programmed from the computer or from the printer keypad.

MT87 WorkStation Printer

from Mannesmann Tally

MT 87 IBM® Emulation

$459.00 | Code HXMT7I | Ship $30.65

MT 87 Epson® Emulation

$459.00 | Code HXMT7E | Ship $30.65

The MT87 Serial Matrix Printer is designed to accomodate the multipurpose needs of the executive workstation. Dual print modes are standard. High speed draft at 200 CPS for invoices, spreadsheets, and listings, and high quality correspondence print at 50 CPS easily accomodateS all your word processing applications. Fully featured printing capabilities, not to mention graphics! Features include:

- 200 cps draft and 50 cps correspondence quality print
- Optional plug-in correspondence typestyle cartridges
- Automatically loads fanfold paper from rear or single sheet and envolopes from front and positions paper at top of form.
- Your choice of film or fabric ribbons
- IBM ProPrinter and Epson FX series compatible (Apple ImageWriter compatiblility pending)

UNINTERRUPTABLE POWER SUPPLY

SAFE Uninterruptable Power Supplies

from Safe Power Systems, Inc.

SAFE Power Systems feature built-in overvoltage, overload and short-circuit protection, electrical surge suppression, automatic battery recharging, and fast, synchronized in-phase transfer time to battery backup. They provide up to 30 minutes of computer run time and full battery recharge times are far shorter than many other backup systems. All SAFE units are protected with low-battery cutoff circuits. Safe Backup Power Systems Features include:

- Typical 10-30 minute backup
- Protects against sags, spikes and outages
- Synchronized in-phase transfer
- Batteries always charged
- Visual and audible "on" indicators
- Two-year warranty

SAFE 250

$284.00 | Code HXSPP2 | Ship $22.00

Power protection at low cost, this model is an excellent choice for home and small business applications. (Transfer time from 2-4 milliseconds, up to 10 minutes run time for fully loaded PC)

Output Power	250 Watts
Frequency	60 Hz
Output Current	2.2A
Output Voltage (VAC)	115
Transfer Time	2-4 ms.
Run Time (Min.)	10-25

SAFE 400A

$399.00 | Code HXSPP4 | Ship $37.00

Designed systems connected to Hard Drives and peripherals. The 400A also has a built-in capacity for power backup of office equipment requiring 400 Watts of power.

Output Power	400 Watts
Frequency	50-60 Hz
Output Current	3.4A
Output Voltage (VAC)	115
Transfer Time	3-5 ms.
Run Time (Min.)	10-30

SAFE Surge Supressors

from Sylvania, GTE and SAFE Power Systems, Inc.

The SmoothLine series of surge protection devices were manufactured specifically to provide an advanced level of protection for computer and telecommunications equipment against damaging voltage surges, spikes and transients. Built to rugged commercial-grade specifications, SmoothLine suppressors feature patented circuitry for maximum surge protection. High energy MOVs, in conjunction with a sophisticated filter network, block out noise and transients common to most AC power.

Smoothline CP-211 (2-Outlet) Power Surge Suppressor

$49.00 | Code HXXX2S | Ship $1.19

Manufactured specifically to protect personal and small business computers, video, telecommunications, and other electronic equipment against voltage surges, spikes, and transients. Protection elements include 3 high-surge suppression metal-oxide varistors for surge suppression with LC filter network for effective noise suppression. Meets or exceeds UL standards!

Smoothline CP-220 (4-Outlet) Power Surge Suppressor
$59.00 | Code HXSP2S | Ship $1.19

Manufactured specifically to protect personal and small business computers, video, telecommunications, and other electronic equipment against voltage surges, spikes, and transients. Protection elements include 3 high-surge suppression metal-oxide varistors for surge suppression with LC filter network for effective noise suppression and a 15 amp circuit breaker to protect against high currents. Meets or exceeds UL standards!

Smoothline CP-235 (6-Outlet) Power Tap
$15.00 | Code HXSP6S | Ship $1.50

Provides a power source extension with six AC outlets with transverse mode power protection. Protection elements include a high energy MOV line to neutral and replaceable 10amp fuse to protect against damage due to high currents.

Smoothline CP-236 (6-Outlet) Power Surge Suppressor
$72.00 | Code HXSPSP | Ship $1.75

Protects sensitive computers and telecommunications, and other electronic equipment against voltage surges, spikes, and transients. Protection elements include 3 high-surge suppression metal-oxide varistors for surge suppression with LC filter network for effective noise suppression and a15 amp circuit breaker to protect against high currents. Meets or exceeds UL standards!

Smoothline CP-239 (4-Outlet) Telecommunications (modem) and Power Surge Protector
$59.00 | Code HXSPPM | Ship $2.00

Protects sensitive computers and telecommunications, and other electronic equipment against voltage surges, spikes, and transients. Protection elements include 3 high-surge suppression metal-oxide varistors for surge suppression with LC filter network for effective noise suppression and a15 amp circuit breaker to protect against high currents.

Secondary protection is provided by state-of-the-art, solid state voltage and current sensitive semi-conductors that protect electronic equipment as well as delicate home phone wiring. Reduces the risk of damage requiring expensive home and business wiring repairs. Meets or exceeds UL standards!

Smoothline CP-553 Telecommunications (modem) Protector
$39.00 | Code HXSPMP | Ship $1.00

Provides effective overvoltage protection for sensitive electronic telephone equipment and protects delicate house phone wiring from dangerous power surges. This simple, economical plug-in device incorporates state-of-the-art solid state voltage sensitive semi-conductors. Specifically designed to work in conjunction with the Primary Phone Line Protector installed by the phone company. It allows the Primary Protector to handle high energy surges while providing fast response time necessary to protect electronic equipment.

FIVE OF THE MOST PROGRESSIVE IDEAS YOU'LL FIND IN A PRINTER.

AND ONE OF THE MOST BACKWARD.

1. 200 cps draft and 50 cps of clean, crisp correspondence quality for 1,500 pages per month. Graphics, too.

2. Uncommon options: interchangeable type cartridges and your choice of film or fabric ribbon.

3. An 80-column and 132-column format with quick-tear access to eliminate all-too-common paper waste.

4. Fully compatible with Apple® IBM® ProPrinter™ and the Epson® FX series.

5. German precision engineered for exceptional reliability. At a 25% duty cycle for 40 hour work weeks, average time before servicing: 5,000 hours.

F. Fanfold paper in the tractor assembly automatically backs out when you load single sheets or envelopes from the front. No manual maneuvering, no extra layer of paper to blur printing. And no way you'll get this on an IBM® ProPrinter.

MANNESMANN TALLY

The MT87 Workstation Printer

ACCESSORIES

DISKETTES

Bulk Blank Diskettes — 5 1/4"
(Brand Name Boxed SSDD)

1 Box of 10 diskettes
$5.00 | Code HGEN10 | Ship $.50

10 Boxes of 10 diskettes
$39.00 | Code H2X100 | Ship $5.00

Quality blank diskettes are 5 1/4" single-sided double-density with mylar hub ring for more durability and longer life.

Bulk Blank Diskettes — 5 1/4"
(Brand Label Boxed DSDD)

1 Box of 10 diskettes.
$7.00 | Code HGENDS | Ship $.63

10 Boxes of 10 diskettes
$59.00 | Code H2X10D | Ship $6.25

Diskettes are 5 1/4" double-sided double-density.

Bulk Blank Diskettes — 3 1/2"
(Brand Name Boxed)

Box of 10
$11.95 | Code HX/SS3 | Ship $.63

100 diskettes
$99.00 | Code HMX100 | Ship $6.25

Single-sided 3.5" micro-floppy diskettes only.

Double-sided 3.5" Micro Floppy Diskettes only

Box of 10
$15.95 | Code HX/DS3 | Ship $.63

100 diskettes
$150.00 | Code HMX10D | Ship $5.00

Preformatted 800K 3 1/2"
Box of 10

ProDOS 800K
$13.40 | Code H2XMFD | Ship $1.00

Macintosh 800K
$13.40 | Code HMXMFD | Ship $1.00

DISKETTE STORAGE BOXES

Disk Banks — 5 1/4"
$4.50 | Code HDBA | Ship $1.00

Store and protect your valuable diskettes in this unique and versatile disk filing system. Each "bank" holds up to 10 5 1/4" diskettes and features a slide-out drawer, convenient interlocking grooves on sides & top for stacking and expansion. Labels are included for quickly identifying the contents of each bank.

Micro/File 40™
$6.95 | Code HDSMT3 | Ship $2.00

Protect, organize and store your 3 1/2" diskettes in this sturdy, high-impact plactic storage system. Attractive,smoked see through cover, adjustable tab dividers. Holds up to 36 3 1/2" diskettes.

LaCage a' File™
$14.95 | Code HCGFIL | Ship $5.00

Keeps your disk boxes organized and portable. La Cage a File is a unique solution for floppy disk storage. Working as a bookshelf on your desk. La Cage a File keeps you organized and productive. To take it with you, just drop the bar and flip up the handle, and La Cage a File converts into a portable cage. Either way — at your desk or on the go — your valuable disks are protected. Includes 5 colored disk boxes.

Convenience. Flip-top disk boxes sit flat on top of La Cage a File, providing additional desk space. Most of the popular 10-pack disk boxes — plastic or cardboard — will fit in La Cage a File.

Protection. The light weight, yet sturdy, construction of La Cage a File provides the protection required to support the fast growth of portable computers in field applications.

Transportability. You'll find La Cage a File easy to carry, while it protects your valuable disks and materials.

Locking 5 1/4" Diskette Filebox

$12.95| Code HXXXLB | Ship $3.13

This attractive locking tray holds 60 diskettes. The smoked plastic cover hinges back out of the way when in use. Five adjustable dividers and two keys included. Gives you enough security to "keep the honest people honest."

MOUSE GLIDES

MouseEase™

from Tacklind Design, Inc.

$1.99 | Code HXT7ME | Ship $.06

MouseEase™ consists of four Teflon™ coated pads which attach to the bottom of your mouse to produce the smoothest moving mouse action imaginable. MouseEase pads will increase the life span of the mouse by protecting the front pins from wearing down after prolonged usage, or by replacing those that are already worn down. Combine MouseEase with our MousePad and you'll wonder how you made it without them. They're great!

MOUSE PADS

Mousepad™

by Moustrak, Inc.

$5.95| Code HMSMAT | Ship $1.00

The Mouspad is a special cloth-covered foam-rubber tracking pad for the Apple mouse. The foam bottom stays put on your desk. The textured surface gives the most faithful skip-free tracking of any mouse pad we have tested yet (11 X 9 1/2").

PRINTER RIBBONS

Note: Printer ribbons are purchased from several sources. Brand name may vary. We guarantee satisfactory quality.

Color Printer Ribbons

for ImageWriter II

$9.90 each, **$54.00** for six | Code HXXXIC | Ship $.38

Panasonic Printer Ribbon

KX-P1090, KX-P1091, KX-P1092

$7.50 | Code HPANRI | Ship $.31

ProWriter Printer Ribbon

Fits ImageWriter, AppleDMP, NEC 8023A

$3.95 | Code HPRC | Ship $.19

Tally 160L Printer Ribbon

$12.50 | Code HTRC | Ship $.44

Tally 180L Printer Ribbon

$17.00 | Code HTRI | Ship $1.00

PRINTER STAND

Universal Printer Stand™

$17.50 | Code HSTAND | Ship $2.00

Now there is no excuse for cluttered desktops! This attractively designed, clear plastic adjustable printer stand will fit any size printer. Save valuable desk space (plenty of room for paper underneath) and organize your desktop! All for the low, low price of $17.50.

CO-OP PUBLICATIONS

Bound Set of *Call-A.P.P.L.E.* Issues

1982 Calendar Year
$18.50 | Code PPK5 | Ship $6.00

1983 Calendar Year
$18.50 | Code PPK6 | Ship $6.00

1984 Calendar Year
$18.50 | Code PPK7 | Ship $6.00

1985 CalendarYear
$18.50 | Code PPK8 | Ship $6.00

1986 Calendar Year
$18.50 | Code PPK9 | Ship $6.00

Complete set of the individual issues of our magazine for the indicated calendar year. Each is fully indexed for easy reference and binder punched for easy handling.

Call-A.P.P.L.E. Back Issues

March/April 80
$3.00 | Code MM-A 80 | Ship $.50

May 80
$3.00 | Code MMAY 80 | Ship $.50

June 80
$3.00 | Code MJUN 80 | Ship $.50

Nov/Dec 80
$3.00 | Code MN-D 80 | Ship $.50

January 81
$3.00 | Code MJAN 81 | Ship $.50

March/April 81
$3.00 | Code MM-A 81 | Ship $.50

June 81
$3.00 | Code MJUN 81 | Ship $.50

July/Aug 81
$3.00 | Code MJ-A 81 | Ship $.50

September 81
$3.00 | Code MSEPT 81 | Ship $.50

October 81
$3.00 | Code MOCT 81 | Ship $.50

Nov/Dec 81
$3.00 | Code MN-D 81 | Ship $.50

Back issues for 1982,1983,1984, and 1985 may be ordered for $3.00 each.

The code may be figured by adding the first three letters of the month's name and the year to the letter "M". For example, the April, 1983 issue's code would be: MAPR83.

Peeking at *Call-A.P.P.L.E.*

Vol 2, 1979 Compendium
$10.00 | Code PPK2 | Ship $1.00

Vol 3, 1980 Compendium
$15.00 | Code PPK3 | Ship $2.00

This annual publication collects all the articles of *Call - A.P.P.L.E.* magazine for the given year into one volume. Some of the material is dated, but many of the articles on the hardware, programming techniques, tips and tricks are as useful today as the day they saw print. Use with *Call -A.P.P.L.E.* Fastfind to find the precise article of interest. Even better when combined with the Anthology Volumes for the corresponding year!

Call-A.P.P.L.E. In Depth

Diskettes containing all programs published in *Call -A.P.P.L.E.* In Depth's are also available.

Vol 2 "All About Pascal"
$9.00 | Code PID2 | Ship $2.00

"All About Pascal" Diskettes
$15.00 | Code SIN2 | Ship $.19

Wide range of new and useful programs and "in-depth" articles specializing in the Apple Pascal language. Switch to and from BASIC and the Pascal environment, decode a compiled program, edit your own graphics, format text and programs, research the subject with the expanded and up-to-date bibliography, and more! Almost everything you wanted to know about Apple Pascal but didn't know where to look. Also contains supplemental information for beginners.

Vol 3 "All About DOS"

$15.00 | Code PID3 | Ship $2.00

"All About DOS" Diskettes
$15.00 | Code SIN3 | Ship $.13

"All About DOS" contains 288 pages of DOS tutorials and utility programs. "All About DOS" is a fine addition to your A.P.P.L.E. library. Included is a utility to move DOS to the language card, DOS speedups, Catalog manipulation routines, random to sequential (and back) file conversion, relocatable code files, direct sector read/write, DOS 3.3 bug fixes and exotic patches. Loaded with nifty tricks and techniques.

Vol 4 "All About AppleWriter"

$12.50 | Code PID4| Ship $1.00

Make AppleWriter work for you. A technical treatise on AppleWriter; IIe. 19 chapters include full descriptions of each facet, annotating each of four work areas, memory management, zero page, entry points, WPL, modifications, etc. Full descriptions of each subroutine, indexed by address. Not for beginners.

APPLE II PUBLICATIONS

Apple II Instant Pascal Language Reference Manual

Apple Computer, Inc.
$15.95 | Code P2A4IP | Ship $1.00

The only complete and official reference to this new language offers an overview, as well as detailed information on every major feature of the language and system.

Apple IIc Technical Reference Manual

Apple Computer, Inc.
$18.95 | Code P2A4TC | Ship $1.00

Apple's definitive guide for assembly language programmers and hardware designers working on the IIc. Provides a complete overview of input/output capabilities including use of the keyboard and speaker, video display, disk drives, serial ports, mouse and monitor. ROM listings, photographs, diagrams and detailed schematics.

Apple IIe Technical Reference Manual

Apple Computer, Inc.
$18.95 | Code P2A4TE | Ship $2.00

Written for advanced programmers, this manual describes the internal operations of the IIe, including the most recent improvements to the machine. Includes coverage of the

memory space and organization, peripheral devices, and hardware implementation. ROM listings, photographs, diagrams and schematics.

Apple IIGS Technical Reference

by Michael Fischer
$16.95 | Code PGO3TR | Ship $2.31

Everything you needed to know about the Apple IIGS.

Beneath Apple ProDOS

from Quality Software
$13.95 | Code PBAPRD | Ship $1.00

Beneath Apple ProDOS presents a critical non-Apple perspective on this operating system. A must for the person who wants to know what makes ProDOS tick.

Exploring Artificial Intelligence on your Apple II

by Tim Hartnell, Bantam Books.
$11.95 | Code P2B4AI | Ship $1.00

Definitions of A-I, and how-to-do-it examples for the II.

HIRES/Double HIRES Graphics for the Apple IIc and Apple II Family

by William DeWitt, Wiley.
$11.95 | Code P2W3HG | Ship $1.00

Covers creation and I/O for graphics. Includes methods to customize graphics packages.

Inside The Apple IIc

by Gary B. Little
$15.75 | Code PIN2C | Ship $1.75

This is a good inexpensive reference manual for the IIc! If you have ever wondered how the serial port works or what the pinouts of the game ports are, you can find the answers here. More than 350 pages of excellent material.

Inside The Apple IIe

by Gary B. Little
$15.75| Code PINS2E | Ship $2.00

Inside The Apple IIe offers a comprehensive look at the advanced features and capabilities of the APPLE IIe, explores the fundamentals behind the 6502 microprocessor, the operating systems (DOS 3.3 AND ProDOS), the inner workings of disks and also, complete discussions on:

- How to use auxiliary memory on the IIe.
- How to design and implement keyboard input routines.
- How to use double-width graphics.
- How to speed up the cursor auto repeat rate.
- How to digitize and play back your own voice!

Inside The Apple IIe is a superior technical reference and is written in a clear and easily understood style.

Programming the 65816

from Brady Publishing
$14.95 | Code P2S365 | Ship $2.50

This book on the 65xx family of microprocessors by David Eyes & Ron Lichty is a good introduction for the person just getting started in assembly language. It does best preparing the old 6502 pro to revel in the richness of the65816 processor at the heart of the Apple IIGS. Learn how to use both 8 and 16 bit modes in the same program to advantage without branching to tall grass, and get a full explanation of the new addressing modes, block move instructions, etc. The text presents the instruction set in logical chunks, and also alphabetically in the reference section for easy lookup. Many tables are included to contrast the features of the 6502, 65C02, 65802, and 65816 operating modes. Examples are expressed in ORCA/M compatible code.

The Power of AppleWorks

$14.95 | Code PAPWRK | Ship $1.00

This tutorial manual will teach you how to get the most out of the Appleworks word processor, spreadsheet and database. Includes tips on data entry, report formatting and valuable exercises on spreadsheet applications including accounts payable, maintaining a stock portfolio, amortization and checkbook balancing.

MACINTOSH PUBLICATIONS

The Complete Hypercard Handbook

by Danny Goodman
Publised by Bantam Computer Books
$29.95 | Code PMB4HH | Ship $3.00

HyperCard is the hotest new product to come out of Apple since the introduction of the Macintosh. Bill "MacPaint®" Atkinson, created Hypercard around two central ideas. One, that computers should be able to organize information in the same non-sequencial way people do in their minds, and, two, that people should be able to write their own programs without having to become "programmers." These two central ideas have spawned HyperCard. It will change the way you use your computer.

Now you can learn how to harness the power of HyperCard, withThe Complete Hypercard Handbook from Bantam books and bestselling author and Apple guru Danny Goodman. In the first part of this comprehensive resource, Danny Goodman reveals hints, shortcuts and undocumented features of HyperCard. He shows you how to make the most of this exciting new product. In the second half, he explores the hidden power of HyperCard, the HyperTalk language. This simple, yet powerful language gives the ordinary Mac user the power and ability to build and/or customize their own HyperCard applications.

Inside Macintosh, Vol. 1

Apple Computer, Inc.
$17.95 | Code PMA4MI | Ship $3.00

Covers the Mac interface guidelines, general assembly language programming information, memory management, ToolBox user interface, and the mouse.

Inside Macintosh, Vol. 2
Apple Computer, Inc.
$17.95 | Code PMA4M2 | Ship $3.00

Continues on from Vol. 1 to describe disk I/O, communications, and sound generation.

Inside Macintosh, Vol. 3
Apple Computer, Inc.
$13.95 | Code PMA4M3 | Ship $3.00

Covers the Finder, describes the Mac hardware, and gives a detailed summary of software. Valuable appendices and glossary of Mac terms.

Inside Macintosh, Vol. 4
Apple Computer, Inc.
$17.95 | Code PMA4M4 | Ship $3.00

Companion to first three volumes of Inside Macintosh and covers the the features of the Macintosh Plus and Macintosh 512K enhanced computers..

Lon Poole's Mac Insights: Secrets, Shortcuts, & Solutions for the Apple Macintosh
by Lon Poole, Microsoft Press.
$18.95| Code PMM4SS | Ship $1.00

Tips and shortcuts arranged by subject for fast reference.

Programming the 68000: Macintosh Assembly Language
by Ed Rosenzweig, Hayden.
$19.95 | Code P25365 | Ship $2.00

Covers both 68000 assembler and samples of routines needed in serious software development.

Programming the Macintosh User Interface
by Henry Simpson, McGraw-Hill.
$15.95 | Code PMM9UI | Ship $1.00

Emphasizes possibilities, ergonomic considerations and tools to implement user interface designs.

Scientific Programming with Macintosh Pascal
by Richard Crandall, Wiley.
$14.95 | Code PMW3SP | Ship $1.00

Problem-solving techniques for natural sciences and mathematics; a self-teaching format.

The Macintosh Revealed: Vol. 1 Unlocking the Toolbox
by Stephen Chernicoff, Hayden.
$18.95 | Code PMH6R1 | Ship $1.00

Covers the foundations of the Toolbox, how to call routines from applications, memory management, QuickDraw, character text display, and the Finder. Uses Pascal program examples.

The Macintosh Revealed: Vol 2 Programming with the Toolbox
by Stephen Chernicoff, Hayden
$18.95 | Code PMH6R2 | Ship $1.00

Covers high-level Toolbox functions to implement the user interface: overlapping windows, pulldown menus, scroll bars and dialog boxes.

GENERAL PUBLICATIONS

Algorithms
by Robert Sedgewick
$24.95 | Code PXA4AL | Ship $1.00

A survey of the most important algorithms and data structures, including: arithmetic and numerical methods, sorting, searching, string processing, geometry and graphics, graphing, etc.

Apple Numerics Manual
Apple Computer, Inc.
$21.95 | Code P2A4AN | Ship $1.00

Complete definition and coverage of the SANE numerics environment. Essential for anyone creating II or Mac software that requires any type of numeric calculation. Includes separate sections for the 6502 and 68000. Describes use of the assembly language SANE engine.

Applesoft BASIC Programmer's Reference Manual
Apple Computer, Inc.
$15.95 | Code P2A4BP | Ship $1.00

For intermediate to advanced programmers, this complete guide details all the features of Applesoft and offers clear explanations and examples of advanced concepts in program planning, design and development. Topics covered include how to create, change, display and store HIRES graphics and animation sequences, format the screen display, and directly access specific memory locations.

Applesoft Tutorial
Apple Computer, Inc.
$22.95 | Code P2A4AT | Ship $2.00

Designed for those who want to learn to program using Apple's Applesoft BASIC.

Artificial Intelligence, 2nd Edition
by Patrick H. Winston
$35.95 | Code PXA4AI | Ship $2.00

One of the best surveys of the A-I field, now revised to include the latest design and analysis programs, constraint propagation, natural language, logic and learning.

Basic Programming with ProDOS, Revised
$22.95 | Code P2A4PP | Ship $2.00

Explains the use of ProDOS commands from Applesoft including ones for data storage and retrieval. Also covers differences between DOS and ProDOS and the use of Apple Programmer's Assistant (APA).

ImageWriter II Technical Reference Manual

Apple Computer, Inc.
$13.95 | Code PXA4IR | Ship $1.00

Covers all the advanced features missing from your printer's manual; both character-set and graphics modes.

Modula-2 Programming

by Ian Kaplan and Mike Miller, Hayden.
$16.50 | Code PXH6M2 | Ship $1.00

A solid explanation of the language with advanced topics also. Module declaration, enumeration types, data types and structures, set types and records are all discussed.

PostScript Language Reference Manual

Adobe Systems, Inc.
$11.95 | Code PXA4PR | Ship $1.00

Covers the basics of the language and details on graphic and font capabilities, plus semantics of each PostScript operator in dictionary format. Appendices include programming details for the LaserWriter.

PostScript Language Tutorial and Cookbook

Adobe Systems, Inc.
$8.95 | Code PXA4PT | Ship $1.00

This companion to the Reference Manual introduces the language, outlines features and capabilities, and gives many example programs.

ProDOS Technical Reference Manual

Apple Computer, Inc.
$21.95 | Code P2A4PR | Ship $2.00

A comprehensive and detailed book on the inner workings of ProDOS. Written for assembly language programmers.

Smalltalk-80: The Language and Its Implementation

by Adele Goldberg and David Robson
$29.95 | Code PMA4SB | Ship $1.00

Detailed coverage of the language: syntax, system specification, application example, and virtual-machine implementation.

The Software Developer's Sourcebook

by Blaise Liffick
$12.35 | Code PXA4SD | Ship $1.00

Step-by-step coverage of the entire development process. Includes: systems analysis, structured design and programming, human engineering, testing and debugging, documentation, maintenance.

CLOSEOUT

Note: The availability of these items is limited to stock on hand.

Vol 1 "All About Applesoft"

$7.00 | Code PID1 | Ship $1.00

"All About Applesoft" Diskettes

$10.00 | Code SIN1 | Ship $.06

Comprehensive and detailed tour through the Applesoft language – from the construction of BASIC, variables, high resolution graphics subroutines to extending the language with Ampersand functions. Publication includes many useful application and utility programs designed to promote your understanding of Applesoft and how it can work for you. Recommended for all Apple users, although may be a bit heavy going for beginners. Now in its 2nd Printing!

Disk Analyzer 1.3™

by Ronald A. Thisted,Ph.D.
Apple II+,IIe

$10.00 | Code SDOSAN | Ship $.13

This is a utility for viewing and printing the raw contents of a disk. The program is mostly in Applesoft and Big Mac source files are included.

Higher Text Plus With Higher Fonts 1™

by Darrell & Ron Aldrich
Apple II+,IIe,IIc

$15.00 | Code SHTPP | Ship $.38

Higher Text Plus: Generate upper and lower case text in a variety of typefaces, sizes, and colors from your programs. Edit your own character set. Good for educational demos. Software is licensable for your commercial programs. (Note: Assumes a full working knowledge of BASIC.)

Higher Fonts 1: Contains over 25 different fonts for use with Higher Text Plus. Fonts vary from foreign and ancient language alphabets to special math and scientific symbols, game building characters.

Magnivox Professional Enhanced Graphics RGB Color monitor

Model 8CM540

$429.00 | Code HIMIEM | Ship $31.00

The Magnavox 8CM540 is an enhanced color display designed to be used with personal computer products. It is compatible with any personal computer system which generates a RGB signal conforming to the IBM Color Graphics for Enhanced Graphics Adapter specification.

Features include:

- 13 inch diagonal, 90 degree deflection non-glare dark face tube.
- 720 dotsX350 lines resolution (21kHz Mode).
- 25 lines of 80 characters display.
- 9 pin D-shell connector.
- On/Off, contrast, brightness/ text controls on front.
- Text selector (green/amber) voltage selector, vertical hold, size 1, size 2, horizontal phase 1, phase 2 controls on back.

MicroWriter IIe™

by Bill Starbuck
Apple IIe,IIc

$12.50 | Code SMICWT | Ship $.75

Here is a semi-professional screen oriented word processor for all but the most demanding user. Features 40 or 80 column edit modes, an 80 column preview if you edit in 40 columns. MicroWriter is an easy to use word processor and will satisfy the requirements of most users. Requires an Apple IIe and one disk drive. Supports additional drives and a wide range of printers and 80 column cards. Apple IIc compatible.

- Outstanding software value!
- Cut and Paste up to 1024 characters at a time.
- Insert segments to disk – Save segments to disk.
- Search – Search/Replace.
- On screen preview of text before printing.
- Reads and Generates standard DOS 3.3 text files.
- Full IIe keyboard support.
- Text insert,delete, and move.
- Printer drivers included for: ImageWriter, C.Itoh 8510A, Dynax DX-15, Epson FX-80, MX-80 w/Graftrax, Tally, MT160,Tally Spirit-80, Nec 8023A, and Panasonic.
- Instructions included to write custom printer drivers.

MouseWrite™

from Roger Wagner Publishing
Apple IIe (enhanced),IIc,IIGS, ProDOS

$89.95 | Code S2R6MW | Ship $2.50

MouseWrite has matured greatly since its introduction nearly two years ago. If you are contemplating purchase of a mouse for your IIe or IIc, or will be upgrading to a GS, and like the look and feel of Macintosh programs, give this one a close look. It's all there via the use of Mousetext characters: windows, menu bars and scroll bars, the entire desktop metaphor is constructed.

MouseWrite includes all the usual word processing features as well as accessories for telecommunications (300 baud only with Super Serial card or equivalent at press time), simple mail merge, and spell checking. The spell checker, by the way, seems to offer better than average alternatives to the misspelled word. Most major functions can be performed using either the keyboard or the mouse. Most people find a natural transition between command selection entirely by mouse to greater dependence on the keyboard equivalents over time. The beauty is that the choice is yours! The separate tutorial and reference manuals also span the needs of starters to old hands.

MouseWrite benefits from large memory cards configurable as ProDOS RAMdisks (384K or greater required). The extra memory lets you open multiple documents simultaneously, a boon for fast cutting and pasting. If you have 500K of RAMdisk space, the spell checker can run much faster out of memory than floppy disk. The use of a hard disk can also improve speed of operation. Printer support is good, including provision for a custom printer setup. Also supports color printing and fonts on the ImageWriter II. When you consider all the features you would need to pay extra for when pur-

chasing most other word processors, MouseWrite is an excellent value.

Multiview 80/160™

from Checkmate Technology
Apple II, IIe, II+
$99.00 | Code HMULTI | Ship $.13

This high-performance video display card with a good selection of modes for use with standard monitors with a minimum 12 MHz bandwidth. These modes let you display 80-160 characters per line. Additional modes (80 X 32, 80 X 48, 132 X 30) use interlace, requiring a high persistence monitor such as the Amdek 300 or the Apple III for long term use. Uses standard protocols to work with CP/M and Pascal. A special pre-boot program is available for compatibility with THE Spreadsheet version 2.0 and others.

Multiview Spreadsheet Driver™

from Checkmate Technology, Inc.
$10.00 | Code SMSDRV | Ship $.25

Get full power out of THE Spreadsheet 2.0 and the Multiview 80/160 video card. This clever driver allows you to select all of the Multiview display modes simply by returning to the configuration menu. You can change display widths at any time without destroying your spreadsheet data.

SpellWorks™

from Advanced Logic Systems
Apple IIe, IIc
$24.00 | Code SSW | Ship $.69

Mail merge and spelling checker for AppleWorks.

THE Spreadsheet™

Version 2.0 (unprotected)
Apple II+,IIe,IIc
$35.00 | Code STSS | Ship $2.00

THE Spreadsheet Version 2.0 is a spreadsheet calculator program with all the basic features necessary for creation of complicated models, and many advanced features too. THE Spreadsheet Version 2.0 supports:

- Most popular 80 column boards.
- Optional seventy column software display.
- All "language card" compatible RAM cards and IIe extended memory cards(up to 512K).
- Supports full upper and lower case from any Apple computer. (Needs lower case chip/shift key mod. on II,II+)
- Variable column widths.
- Protected cells, hidden cells, and other advanced features.
- Field to field tabbing, for easy data entry.
- Hard disk compatibility.

Note: Identical program in different packaging (e.g. AceCalc) may be substituted for THE Spreadsheet.

True BASIC™

from True BASIC, Inc.
Macintosh
$239.00 | Code SMT6TB | Ship $4.00

BASIC was developed 20 years ago by John G. Kemeny and Thomas E. Kurtz and is today the most widely-used programming language in the world. The novice and expert alike appreciate the ease with which you can write, debug, modify and run BASIC programs. Kemeny and Kurtz have once again joined forces and written a new and modern version of BASIC called True BASIC. True BASIC is a structured programming language, based on the proposed ANSI standard. It retains all the appeal of the original language i.e. it is still easy to learn and use, while adding features and benefits not previously found in microcomputer BASIC.

- True BASIC.
- Runtime Package.
- 3-D graphics libraries.
- $295.00 value.

Walt Disney Graphics Software ™

Now you can bring the magic of Disney into your home with these two exciting programs from Walt Disney Personal Computer Software & Bantam.

Both programs contain more than 100 graphics and 45 poses of such famous Walt Disney characters as Goofy, Mickey Mouse, Donald Duck, Winnie the Pooh and Minnie Too! Design your own comic strips, greeting cards, invitations, banners, use your imagination! Supports color printing on the ImageWriter II. Great fun for the entire family!

Walt Disney Card & Party Shop

$22.50 | Code S2B4CP | Ship $.63

Walt Disney Comic Strip Maker

$22.50 | Code S2B4SM | Ship $.63

Word Handler™

from Advanced Logic Systems
$49.00 | Code SMA3WH | Ship $1.25

Here is a good substitute for MacWrite: more features at a better price. Requires 512K minimum, copyable. It satisfies only two items on Kaye and Connick's wish list (see *MacA.P.P.L.E.* June '86), picky picky, but it has a nice list of features:

- Abbreviations (Macros)
- Form Fill Fields
- Up to 4 documents open
- Read MacWrite files
- File Management commands
- Online Help
- Up to 7 1/2" of text per line using Horizontal Scroll Bar

What is A.P.P.L.E. Co-op?

Early in 1978, A.P.P.L.E., the (Apple Puget Sound Program Library Exchange), was founded by dedicated volunteers bound by their enthusiasm for the new Apple II. Soon the club newsletter,Call-A.P.P.L.E., grew from two pages to become a full scale magazine and an internationally recognized authority. Low cost programming tools created by and for members came next, quickly followed by many more goods and services. In 1984, A.P.P.L.E. became a Co-op to reaffirm the founders' non-profit ideals, and to underscore the fact that the members are the owners of this unique organization.

This year Co-op members enjoyed a 5% return on their purchases, receiving an average dividend of more than $15. Dividends were based on purchases made April 1986 to March 1987.

MacA.P.P.L.E. magazine grew out of the Mac Special Interest Group newsletter in 1986. Also in the same year, APDA (Apple Programmer's and Developer's Association) was co-founded by the Co-op and Apple Computer. APDA is a one-stop shopping place for programming tools and technical documents related to Apple computers. It is the primary outlet for prerelease versions of Apple Computer Inc. technical products. Programming tools produced by other publishers are offered. APDA members who are also Co-op members are eligible for Co-op dividends on all purchases. For more information about APDA, contact the Co-op office.

The Co-op's staff now numbers over 50, organized as publications, hotline support, product development, order processing, and administration. A strong cadre of volunteers continues to provide expert product reviews, specialized consulting for members, and new entries for the public domain library. To these active members, your purchases, your ideas, and your volunteer time make the Co-op strong. Thank you for your participation! The next year promises to be even more exciting than the last. To those thinking of joining — need we say more?

MEMBERSHIP INFORMATION

Membership Categories and Privileges

All annual memberships include 12 issues of one of our magazines. Additional subscriptions to the other magazine is available at extra charge. Please specify which additional magazine(s) you wish to receive at the time you join. Subscriptions may be added at any time, and dropped at the time of membership or subscription renewal.

Regular and **Institutional** members may purchase any product offered by the Co-op, subject to some shipping restrictions. All members have access to other services, including a technical assistance hotline, telecommunications, and public domain software.

Institutional members may: (1) use purchase orders to buy products, (2) receive special discounts on quantity orders, and (3) request additional magazine subscriptions at a reduced rate.

Subscribers receive the magazine only, and are not considered members. This category is not eligible for hotline support, Co-op dividends, or member voting rights.

Non-Members may order products, but they are not eligible for hotline support, Co-op dividends, or member voting rights.

Membership Fees

Regular membership dues, $26 per year, $15 for each additional magazine subscription (see below for postage information).

New Regular members pay a one-time, non-refundable application fee of $23.

- Institutional membership dues, $100 per year.
- Subscription *only*, $21 per year.

Postage: Dues and subscription fees include bulk or second-class magazine postage within the United States. An additional charge is made for international or first-class magazine delivery.

Please contact our Customer Service department for details on eligibility for each membership category, application procedures, and additional postage rates.

Membership Numbers and Cards

A membership number and card are issued when you join the Co-op. Please indicate your member number and expiration date whenever you order products, call or write to us. The card is your proof of membership at fairs and other events away from our online records. A lost card may be replaced for $5.00. (Product Code FMCU.) Member numbers are also printed on all mailing labels.

PRODUCT PURCHASE INFORMATION

Our Pledge of Quality

We will make available to Co-op members, quality products at the lowest possible prices. We will always operate the Co-op in a businesslike manner and follow policies that are in the best interests of our members and consistent with industry practices.

Ordering Products

Orders may be placed by mail, telephone, and online via modem. We favor ordering online through GEnie Network for Information Exchange (APPLE.COOP), MCI Mail (312-7449), Compuserve (73527,27), and AppleLink (UG0006). Orders may also be placed by telephone toll free 1-800-426-3667 in the United States (outside Washington State), 1-800-527-7562 inside Washington State and 1-800-237-4644 from Canada. Or, visit our retail store (prices somewhat higher). Our 800 order lines are answered by the order processing staff during normal office hours (8:30 a.m. to 3:45 p.m. PST), and by an answering machine

at all other times. The 800 number order staff is trained and has equipment for order input only. If you require technical details call the Hotline at (206) 251-0071. If you have questions about an order call the Customer Services Department at (206) 251-9798 (9 a.m. to 3 p.m. PST). For your convenience, a mail-in order form is printed in this catalog and in each issue of the magazine.

Our policy is to inventory items offered in our catalog. Normal shipping time is within five to ten working days. Orders for products temporarily out of stock will be placed in the order queue and filled as soon as possible. In-stock items listed on the same order will be shipped without delay.

Rush Orders

Priority handling service is available for "rush" orders on products in stock. Orders received by 12 p.m. PST will be shipped out the same day. Orders taken after 12 p.m. PST will be shipped the next working day. Your order will be shipped within one business day, and you may also request a special courier service, such as Federal Express or UPS Next Day Air, if desired. The additional fee for priority handling is $25, plus shipping costs. *Orders for priority handling must be placed by telephone using VISA or MasterCard.*

Discount Coupons

From time to time we offer special discount coupons. To qualify for a discount, the coupon must accompany your order either by mail or in person. These special coupons may not be used in conjunction with any other special offer, special sale, or promotional offering. Discount coupons will not be accepted in phone orders.

Payments

Only U.S. funds can be accepted for payments to the Co-op. Except for Institutional members, full payment is to accompany each order.

MasterCard and Visa are acceptable for any dues, fees, or purchases. Personal checks may be used for mailed-in payments and, with proper identification, for retail store purchases. A fee of $12 will be charged to your member account for each check returned for any reason.

Shipping

Products on hand will normally be shipped in five to ten working days after our receipt of your order. In general, products are shipped to the street address listed under your membership number via Federal Express Standard Air (guaranteed second-day delivery) unless directed otherwise. Shipments to APO or FPO addresses and to post office boxes must go by U.S. Mail.

International Hardware Orders

We can ship hardware outside the United States in most cases. Due to the extra handling involved, there is a $3.00 surcharge on all international orders. Please write or call for further information.

Price Changes and Price Protection

Upon publication, each new catalog entirely supersedes all previous catalogs and published product announcements. The prices listed in this catalog are subject to change. Any increases or decreases will be announced each month in our magazines, and will take effect on the first day of the cover month of that magazine, unless noted otherwise.

Increase

If a price goes up, we will honor all orders at the lower price that are received or postmarked before the effective change date. After that date, if the increase does not exceed 10% of the former price, we will process any orders that have payment enclosed for the lower amount, and bill you for the difference. Otherwise, you will be contacted for further instructions.

Decrease

If a price goes down — either through a special sale or a permanent reduction — and you had purchased the identical product (has the same product code — different versions or configurations of the same product are not included) from us at a higher price within 30 calendar days prior to the effective change date, then upon written request, you will receive a credit to your member account for the difference.

Product Warranty

All A.P.P.L.E. Co-op products are warranted by either the manufacturer or A.P.P.L.E. Co-op. All handling of defective products will be done in accordance with the manufacturer's warranty policies. Should a product prove to be defective, it should be returned to the manufacturer unless their warranty policy dictates otherwise. After the 60-day "sale final" date outlined below, all problems with defective products should be directed to the manufacturer. All A.P.P.L.E. Co-op labeled software is warranted for 30 days, and all A.P.P.L.E. Co-op labeled hardware is warranted for 6 months.

Product Returns and Credits

All orders have printed on the invoice a "return by" date that is 30 calendar days after the date of shipment. Products may be returned without prior authorization if the return package is postmarked by this date, and the product is returned in resalable condition (has all original packaging, and all documents and warranty cards intact and unmarked). We will then credit your member account for the original purchase price, less any shipping charges and a 10% restocking fee. Please include a copy of your receipt with your return.

All sales are considered final 60 calendar days after the shipping date shown on your receipt. If you wish to return a product after the 30-day "return by" date but before the 60-day "sale final" date, you need to obtain a return authorization number from our Operations Division. This number should be

clearly marked on both the outside and inside of the package when returning a product. When requesting this authorization, please include the following information:

- Your name, member number, and expiration date.
- Order number, Product description and Product code.
- Reason for the request.
- Indicate whether or not you have the original packaging, documents and warranty cards, and indicate if they are unmarked.

Returns of defective products to A.P.P.L.E. Co-op will not be subject to restocking or return shipping charges.

All returns will be inspected to determine the condition of the merchandise. Any additional expenses we must incur for re-packaging, repairing, or restoring an item to resalable condition may be deducted from the credit. Products that we cannot return to resalable condition may not be accepted for credit and will be returned to the customer.

Returns are credited to an individual's account toward future purchases. You may request a cash or charge-card refund as an alternative to credit on account, but it should be in writing and is subject to Co-op approval. Refunds are not available for software products.

SHIPPING INFORMATION

U.S. Shipping Charges

The A.P.P.L.E. Co-op now ships products by Federal Express Standard Air (guaranteed second-day delivery) unless directed otherwise.

Simply add the shipping charges listed in parentheses in the catalog. Add to this total the $1.80 "base shipping fee" to determine your total shipping cost. The minimum shipping charge is $6.00. If you wish, we will calculate shipping costs for you on credit card orders. You may specify lower-cost U.P.S. surface shipping. Note: U.P.S. surface shipments may take up to two weeks from shipping date to arrive, and cannot be traced before the two weeks have elapsed. We will calculate the surface shipping costs for you on credit card orders. If you wish to pre-pay by check you must determine the weight of the products you are ordering, then contact U.P.S. (or call us) to get the shipping charges. The shipping charges given in the catalog equal $1.00 per pound, and so may be converted easily to product weights ($.50 = 1/2 pound).

Neither Federal Express nor U.P.S. will deliver to Post Office boxes. You may specify first class mail, and use a P.O. Box for orders less than 8 ounces.

International Shipping Charges

International Shipping is by Federal Express Priority-1 Service, giving two-day delivery to most parts of the world. Note there are no "brokerage fees" to pay once the package arrives. Calculate your shipping costs like this:

1. Add the shipping costs shown in parentheses in the catalog.
2. Convert this cost to pounds. Catalog costs are $1.00/lb. Thus a total cost of $3.75 would equal 3 3/4 lb.
3. Round the weight to the next higher pound.
4. Find your geographic area, then look up the international shipping for the total weight of your shipment.

Canada

1-2 lb.	$21.00
3-5 lb.	$21.00 + $3.00/lb. over 2 lb.
6-7 lb.	$33.00 + $2.40/lb. over 5 lb.
8-14 lb.	$37.80 + $1.80/lb. over 7 lb.
15-17 lb.	$50.40 + $1.20/lb. over 14 lb.
18-20 lb.	$54.00 + $0.90/lb. over 17 lb.
21-25 lb.	$56.70 + $0.69/lb. over 20 lb.

Caribbean & Mexico

1 lb.	$24.00
2 lb.	$26.00
3-10 lb.	$26.40 + $3.00/lb. over 2 lb.
over 10 lb.	$50.40 + $2.40/lb. over 10 lb.

Europe, Far East & Australasia
1-100 lb. $21.00 + $3.00/lb. over 1 lb.

Ctrl. & S. America, Mid East, Africa
1-25 lb. $33.00 + $6.60/lb. over 1 lb.

How to Get More Information

To inquire about the status of an order, write to our Cutomer Services Department, or call (206) 251-9798 business days between 8:30 A.M. and 4:00 P.M. Pacific time.

To request information about the operation of products we sell, write to our Product Development Department or call our Hotline at (206) 251-0071 weekdays between 9:00 A.M. and 3:00 P.M. Pacific time (members only). Please allow at least six weeks for a written response to your letter.

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Nashua brand diskettes are made with a quality control process that's so precise, it ensures outstanding performance. And with our attractive price and lifetime replacement warranty,* there's no reason to choose anything but Nashua.

*Nashua offers a limited lifetime replacement warranty. It does not cover consequential damages. For a copy of this warranty, ask your Nashua dealer or call 800-336-8100. © 1985 Nashua Corporation.

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ORDER FORM

Member #: _____
Last Name: _____
First Name: _____
Phone #: _____

Date: _____
Street: _____
Address: _____
City: _____
State/Country: _____
ZIP/Postal Code: _____

QTY.	CODE	UNIT PRICE	AMOUNT	PRODUCT NAME	(SHIP. COST)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

Subtotal: _____

Foreign Federal Express Shipping: _____ <— (look on table) <— convert to lb. <—

(or)

Other U.S. Shipping: _____ <— (calculate cost) <— convert to lb. <—

Specify Other _____

(or)

U.S. Federal Express Shipping: _____ <— (Minimum $6.00) <—

WA. residents add 8.1% Sales Tax on the items above _____

TOTAL AMOUNT _____

Shipping Cost Subtotal: _____

Plus Federal Express Base Fee: $1.80 _____

See "Shipping Information" Section. (All U.S. shipping via Federal Express Standard Air Unless "Other" is specified).

Payment: ❑ Check # _____ ❑ VISA ❑ MasterCard

P.O. #: _____

Credit Card #: _____

Expiration Date: _____

MAIL TO:

A.P.P.L.E. Co-op
290 SW 43rd Street
Renton, WA 98055

ORDER FORM

Member #: _____
Last Name: _____
First Name: _____
Phone #: _____

Date: _____
Street: _____
Address: _____
City: _____
State/Country: _____
ZIP/Postal Code: _____

QTY.	CODE	UNIT PRICE	AMOUNT	PRODUCT NAME	(SHIP. COST)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

Subtotal: _____

Foreign Federal Express Shipping: _____ <— (look on table) <— convert to lb. <—

(or)

Other U.S. Shipping: _____ <— (calculate cost) <— convert to lb. <—

Specify Other _____

(or)

U.S. Federal Express Shipping: _____ <— (Minimum $6.00) <—

WA. residents add 8.1% Sales Tax on the items above _____

TOTAL AMOUNT _____

Shipping Cost Subtotal: _____

Plus Federal Express Base Fee: $1.80 _____

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P.O. #: _____

Credit Card #: _____

Expiration Date: _____

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Renton, WA 98055

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